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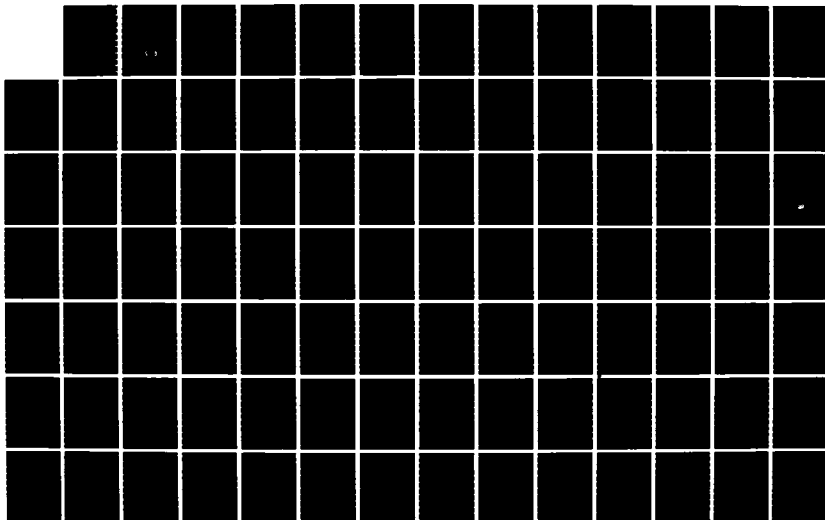
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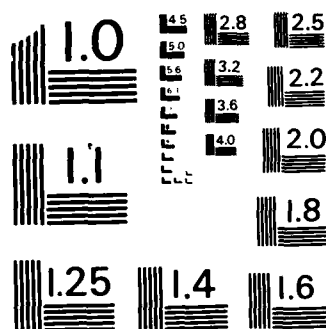
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THE UNIVERSITY OF CHICAGO

A SEMINAR PAPER SUBMITTED TO
PROFESSOR RICHARD HELLIE, SEMINAR 430-666

RELUCTANT ALLIES:

THE UNITED STATES ARMY AIR FORCE

AND

THE SOVIET VOENNO VOZDUSHNIE SILY

1941-1945

DEPARTMENT OF HISTORY

BY

DANIEL P. BOLGER

CHICAGO, ILLINOIS
JANUARY, 1985

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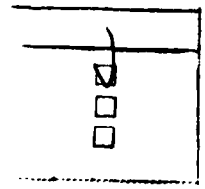
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NOTE ON TRANSLITERATION

Transliteration in this work is based upon a system used by the general public. It is summarized in Ruth L. Pearce, Russian For Expository Prose, Volume 1 (Columbus, Ohio: Slavica Press, Inc., 1983), pages 45 through 47. She refers to it as "System I." The transliteration is summarized below:

А = A	С = S
Б = B	Т = T
В = V	У = U
Г = G	Ф = F
Д = D	Х = KH
Е = E (YE if initial)	Ц = TS
Ё = YO	Ч = CH
Ж = ZH	Ш = SH
З = Z	Щ = SHCH
И = I	Ъ =
Й = Y	Ы = Y
К = K	Ь =
Л = L	Э = E
М = M	Ю = YU
Н = N	Я = YA
О = O	ЫЙ = Y
П = P	ИЙ = IY
Р = R	

CHAPTER 1

PRECEDENTS FOR COOPERATION

JUNE 1941 TO OCTOBER 1943

Introduction

If one says the word "Russian" or "Soviet" to the average American, an image is immediately connoted. The vision involves pictures of the KGB breaking down doors at midnight, rows of orderly gray-green missiles passing somber, stiff, slab-cheeked old men swaddled in lumpen black greatcoats, and disgruntled, grumbling Slavs inching through long bread lines. After all, Russians are the "bear in the woods," the "evil empire," the "Threat" in Pentagon terminology, and the other, darker half of a Manichaeian bipolar world view. The USSR appears to most folks in America as a mysterious but undoubtedly inimical force. These same people would no doubt be amazed, indeed shocked, to discover that American soldiers served for over a year on the soil of the USSR, launching combat air missions against a common foe. It is said that war can make strange bed-fellows, and the Second World War pushed some quite unwilling partners together.

The mutual struggle against Adolf Hitler's Germany linked the United States of America and the Union of Soviet Socialist Republics as allies in the great common cause. Most Americans think that the United States' wartime relations with the distant Russians were

limited to Lend-Lease Ford trucks and pictures of mustachioed "Uncle Joe" Stalin on the pages of Life magazine. In general, that view is not too far off the mark. Few distinctly military projects were attempted. An arrangement of aerial maneuvers code-named FRANTIC comprised the largest and most complete such program. This was the only direct combat cooperation between the American and Soviet war efforts.

The United States Army Air Force conducted FRANTIC as an extension of the Combined Bomber Offensive (CBO) in Europe. The 8th and 15th Air Forces flew huge fleets of powerful B-17 "Flying Fortresses" deep into central Europe to blast German war materiel and military bases, then continued east to land in the Ukraine. Soviet troops (many of them women), serviced and protected the Army Air Force units, which rearmed and flew off to hit more targets enroute to their home stations. These "shuttle" operations occurred for several reasons, not all of them obvious at first glance. FRANTIC employed unique methods to achieve its ends, and it provided the only real example of large-scale USA/USSR joint military operations in World War II.

Was this unusual program a success? How was it arranged, and why? Most importantly, was it worth the effort, or was it just an empty political demonstration? To evaluate the effectiveness of FRANTIC, one must first understand its component parts. This work delineates one view of how FRANTIC evolved, how the shuttle raids were executed, and what the FRANTIC missions accomplished. All major undertakings come from ideas, and the germ of FRANTIC was born at the end of July, 1941, four months before Pearl Harbor.

Early Developments

The nature of the Second World War altered markedly on 22 June, 1941. Surging forward in an ambitious scheme called Operation BARBAROSSA, the Nazi German Heer and Luftwaffe turned their energies against the Soviet Union. The resultant four years of combat occupied the greater portion of the German Army's capacity and almost all of the considerable assets of the USSR. It was a death struggle in every sense of the word, and its opening phases seemed remarkably (and depressingly) similar to other Nazi "blitzkrieg" thrusts. However, by lunging into the USSR, Adolf Hitler pushed Josef Stalin's Communist dominion into military alliance with Great Britain (and, eventually, with the United States of America). The German war plan underestimated its means and ends. In retrospect, BARBAROSSA was probably doomed from the start by Soviet economic and military reserves. Still, France should have won handily in May of 1940 if pure statistics determined battles. The Germans denied the raw numbers and gambled on Teutonic quality. At the outset, the gray-clad Wehrmacht had it their way.

By late July, 1941 the situation facing Josef Stalin and his Stavka was disasterous in every sense of the word, with only the magnitude of the Soviet defeat still in question. The German assault had caught the Red Army flat-footed. BARBAROSSA's panzer thrusts had encircled and destroyed major chunks of the USSR frontier armies early in the campaign. The Luftwaffe bombed much of the forward Soviet air strength on their airstrips. As a result, by late July, the Nazi units stood within a hundred miles of Leningrad in the north, at Smolensk (200 miles from Moscow) in the center, and at the gates of Kiev in the

Ukraine. At Smolensk alone, most of three Soviet armies had been surrounded and destroyed, with heavy casualties in men, guns, tanks, and aircraft. The rapid German movements threatened Soviet production means; without armaments to outfit its mobilizing manpower, the USSR could not hope to survive for long. The USSR's State Planning Commission (Gosplan) had begun efforts to move factory systems further east, but the racing Nazi tanks endangered that complicated undertaking.¹ Such bleak conditions prevailed in Russia when Harry Hopkins came to call.

Hopkins, the personal envoy of President Franklin Delano Roosevelt of the United States, had arrived to discuss the extension of American Lend-Lease to the embattled Soviets. Hopkins met with Stalin on 30 and 31 July, 1941. The two men considered the question of American support and agreed on some priorities, and Hopkins got a fairly frank and accurate briefing concerning ongoing military operations. The second meeting, on 31 July 1941, featured an unusual comment by Stalin that no doubt evidenced the depth of concern over BARBAROSSA's successes to date. Stalin told Hopkins that he would "welcome (the) American troops on any part of the Russian front under the complete command of the American Army." Since his portfolio was limited to Lend-Lease activities, Hopkins naturally backed off this proposition. However, Mr. Hopkins immediately cabled it under classified headings directly to President Roosevelt.² The United States was not yet at war, but this request of Stalin's was not forgotten once the Americans joined the fray. Soviet circumstances would never again be so desperate as that late summer and early fall of 1941.

Casting about for some instant reinforcement, the Soviet

generalissimo also petitioned his new British allies. Stalin's persistence in asking for direct military aid convinced the government of Great Britain to take concrete steps to meet Soviet demands for immediate assistance. Unable to send ground forces (though Stalin in fact wanted such units), Winston S. Churchill ordered air assets deployed to support the northern convoy routes. Churchill hoped that these planes would free up USSR air armies for service on the main front. At the same time, the single-engine fighters would fly cover for the Royal Navy and merchant ships on regular transits to Murmansk. This served the British interest, in light of likely Soviet withdrawals of peripheral northern forces to strengthen the Moscow defense efforts. In this way, Churchill covered the Stavka's likely pull-out and made diplomatic capital toward assisting the Soviets as part of the bargain. On 6 September 1941, two squadrons of Hurricane fighter planes from Great Britain's Royal Air Force (RAF) landed at a Soviet airfield outside Murmansk, the first non-Russian military element to enter the territory of the USSR to conduct combat operations.³ This action set a precedent for Western Allied operations in the Soviet Union, and significantly, it involved an aviation component. In this first case, the immediate strategic advantage accrued to the Stavka outweighed the standard Soviet paranoia about foreign military elements in Russia. The VVS (Voenno-vozdushnye sily) (Red Air Force) had a desperate need for the aircraft released by the British squadrons. The Royal Navy received more reliable air cover. Thus, both sides benefited.

By 2 December 1941, about the same time six Imperial Japanese Navy aircraft carriers were plowing through the stormy north Pacific enroute to Pearl Harbor, the Soviet Army regained control of the

situation in European Russia. Crushing the last German stab at Moscow, Stalin's armies counterattacked on a wide front. The core of the Russian counterstroke formed around several fresh armies transferred from eastern Siberia, since Stalin had solid intelligence service evidence that Japan had no designs on the Soviet Union. Though the Moscow counteroffensive fell far short of the Stavka's desires for a decisive victory, it rolled back the battered German divisions. The Soviets would have a few more serious scares, notably around Stalingrad and in the Caucasus. In general, and in the grim realism of Stavka estimates, this particular edition of the Drang nach Osten had shot its bolt.⁴

As the freezing Germans fell back grudgingly before Moscow, the United States of America experienced a shock as embarrassing as 22 June, 1941 had been for the USSR. Fortunately for America, the target was small and the followup ground invasions were half a world away. Skilled, well-rehearsed Japanese air attackers devastated the United States Navy's Pacific Fleet as it rode at anchor in Pearl Harbor, Hawaii. The 7 December surprise strike also eliminated the Army Air Forces (AAF) in Hawaii as a viable entity, a bit of work completed on 8 December when Clark Field in the Philippine Islands was also ravaged. Mobilized as the "Arsenal of Democracy" but not for shooting war, the United States turned to its main problem at hand, the vigorous Japanese. This was despite a German declaration of war (and a U.S. declaration in kind) a few days after. Though the Americans had agreed before Pearl Harbor to try to meet the German threat first, the immediate crisis of the collapse in the Pacific began to alter American strategy. It would be months before any sizeable ground or air forces would be ready, so the Pacific war devolved upon the

remnants of the U.S. Navy and a few Army and Marine regulars at dispersed posts such as Luzon, Wake Island, Guam, and Midway Island. As for Europe, more of the same (Lend Lease and U.S. Navy convoy escorts) would have to do for some time.⁵ America's two front war and its lack of readily deployable forces ensured that the Soviets alone would contend with the bulk of Hitler's armies, at least for the next year or so.

British generals came to Washington two weeks after Pearl Harbor to talk to their American counterparts. Interestingly, one of the first things General H. H. "Hap" Arnold (Commanding General, USAAF) said to RAF Air Chief Marshal Sir Charles Portal concerned a pending American request for the use of Soviet air bases outside Vladivostok, in order to allow the bombing of Japan. Sir Charles expressed grave doubts that such a thing would ever come to pass, as he opined that it was not in the Soviet interest to allow any bellicose developments on the quiescent, neutral Manchurian border.⁶ The idea of utilizing Siberian aviation facilities to bomb Japan became a recurrent theme in American military and diplomatic circles as they considered the USA/USSR alliance in all its possibilities. The simple fact the Stalin consciously chose not to battle Japan until the Germans were finished served as a constant negation to this seemingly simple solution to the problem of flying raiders over to an island nation many thousands of miles from the United States. Siberian bases, as Air Chief Marshal Sir Charles Portal indicated, were militarily attractive but politically untenable.

By April 1942, the wars in Europe and the Pacific proceeded from one critical juncture to the next. In Russia, the Germans had stopped retreating and stood fast, their lines bent but unbroken. A major

Soviet attack on Kharkov failed. Worse, it was becoming quite evident that the Germans were in no way finished. The summer would bring a renewed offensive on a wide front, though the Stavka could not agree on the Nazi intentions. Major Soviet losses of 1941 were not yet fully replaced, and all sorts of equipment shortages persisted. The German U-Boats enjoyed huge successes amidst confusion on the American Atlantic coast, imperilling supply shipments to the British and Russians alike. As for the British in North Africa, the brilliant German Erwin Rommel pressed them to the Egyptian border and threatened further maneuvers. The Pacific was a pall of gloom, with Singapore lost, the Philippines about to fall, and little Allied power available to reverse matters. The Japanese took control of the East Indies, the Central Pacific atolls, and much of New Guinea. Australia appeared to be in jeopardy. The United States' war effort consisted of a series of harassing carrier raids. One of these was the spectacular, if somewhat pointless, Doolittle raid on Tokyo, which featured AAF medium bombers rumbling off of U.S. Navy aircraft carriers to sow a few bombs and much confusion in the Japanese homeland.⁷

On 18 April 1942, as Colonel Jimmy Doolittle's fliers attacked Japan, President Franklin D. Roosevelt discussed air strategy with General H.H. Arnold. The President mentioned that V.M. Molotov, the Soviet People's Commissar for Foreign Affairs, would visit Washington soon, then asked Arnold if he thought there was any military utility in asking to use Soviet air installations in European Russia to support U.S. bomber operations. Perhaps the President recalled an August, 1941 Army Air Force war plan that envisioned a possible use of air stations in the European USSR in the event of war with the Nazi state. In any event, Arnold gave his whole-hearted backing to the

concept, stating: "I should like nothing better than shuttle-bombing between England and Italy to Russia, hitting targets in Eastern Europe en route."⁸ Arnold told the President that such a technique would allow American bombers to hit eastern German targets without having to fight back through the westward-oriented Luftwaffe fighter direction network. This conversation is especially unusual, considering that not one American heavy bomber mission had been flown as of 18 April, 1942. The discussion indicates that the "shuttle-bombing" idea predated the first actual raids.

In fact, the first American heavy bomber attack on occupied Europe traced directly to the 18 April Doolittle mission and to the Roosevelt-Arnold exchange. The European bomber strike, nicknamed HALPRO (Halverson Project 63 in full title), was led by Colonel Harry A. Halverson. HALPRO consisted of thirteen B-24 "Liberator" four-engine heavy bombers. The raid force had originally comprised twenty three Liberators, intended to reinforce Doolittle's attack with bombing of their own. Halverson's charter plan conceived of a raid on Tokyo via China. The Tokyo assault never came off, and HALPRO was redirected against the Balkans from Khartoum, Sudan. In late May, 1942, the United States notified the USSR (through diplomatic channels) that it planned to hit enemy oil refineries at Ploesti, Rumania. The Americans requested a Soviet landing field for HALPRO, to preclude a lengthy and dangerous return flight. While waiting for a response from Moscow, ten of the B-24s degenerated to an unusable condition. With Khartoum's dust and heat eating at his bombers, Colonel Halverson got permission to proceed with his Ploesti mission on 11 June 1942. As with Doolittle in Japan, the tiny force created a stir but little damage. Most of the B-24s crash-landed in Turkey and

the crews were interned. A week later, the Soviet approval for landing rights (at a base near the Black Sea) arrived in the normal diplomatic channels.⁹

By June of 1942 some of the central ideas that would soon comprise the FRANTIC shuttle bombing project were out and about under discussion. The brilliant American naval triumph at Midway (4-6 June 1942) reversed the Imperial Japanese Navy's ascendancy in much the same way that the Moscow counteroffensive brought the Wehrmacht to a halt. Like their Soviet allies, the United States' Pacific forces would have some frightful moments, but the American civil and military leaders knew that the tide had turned.¹⁰ Nevertheless, the Army Air Forces did not have bases in range of mainland Japan, so it had a real interest in Siberian facilities, though no formal diplomatic request had been made to Josef Stalin. The AAF also saw operational advantages for "shuttle" operations into Russia, tracing back to the summer of 1941. American air generals went so far as to try to include the strategem in the initial European raid. There were no USAAF staff studies conducted to examine either of these concepts. Adolf Hitler's designs on Caucasus oil would offer the USAAF an opportunity to become more specific about working with the Russians.

VELVET: An Offer Refused

The Wehrmacht titled their Eastern Front summer offensive "Operation BLAU." The bold scheme promised big gains in the southern USSR. If BLAU succeeded, the Nazi units would strip the Donbas industrial region away from Soviet control, and perhaps even capture the oil fields at Baku. Though the 1942 German attack would push for the Caucasus Mountains in strength (with supplemental assaults on Leningrad in the north and Sevastopol in the Crimea), BLAU reduced the Nazis to a single primary axis of operations in the south. The Heer and Luftwaffe no longer deployed the combat power to press along the entire front. Still, the thrusts of Germany's Army Groups A and B were serious and sizeable, driving Soviet armies east of the Volga River and presenting real threats to Russian oil resources. Coming upon the heels of Stalin's abortive Kharkov offensive in May, the 28 June 1942 German attack provided a serious strategic setback for the USSR.¹¹

The United States government anticipated the danger to the Caucasus. As early as 15 May, President Roosevelt reported to his military advisors that he was willing to send an American air element to Russia to help defend the oil reserves. When the German maneuvers conformed to their expected directions, Roosevelt and Churchill faced a dilemma. Stalin, quite naturally, appealed for additional supplies and an immediate Second Front in occupied France. The Soviet pleas grew increasingly more strident as Operation BLAU developed in July. However, despite some staff work on an emergency French invasion coded as SLEDGEHAMMER, most British manpower went to North Africa in a vain attempt to stem a refueled, rampant AFRIKA KORPS. As for the American

Army, it was not yet ready for any large-scale offensive, regardless of its generals' avowed intentions.¹² The second front in France would not come in 1942.

Stalin's defense of the Caucasus suffered a further setback in July, 1942. After horrendous losses on Murmansk convoys PQ-16 and PQ-17, the British government suspended all further convoys until further notice. Stalin still received substantial logistical aid through the Persian Gulf, though that route was in danger given the azimuth of the Nazi assaults. No doubt the Soviet leader would have been further enraged if he knew that additional escort ships for the "PQ" runs had been diverted to protect merchant shipping devoted to TORCH, a combined British/USA invasion of western North Africa set for the fall of 1942. The sharp Soviet protest, orchestrated by Ambassador to Britain Ivan Maiskiy, resulted in an Admiralty concession to consider a September shipping movement (PQ-18). Churchill promised to meet Stalin in August, 1942.

By August, 1942, the Soviet situation grew worse, with Germans racing for the Caucasus passes and the Nazi Sixth Army nosing into Stalingrad, on the Volga River. In North Africa, Rommel's dusty panzers shoved the British into Egypt, menacing the Suez Canal and the British Imperial communications and transport system. The United States fought on Guadalcanal in the Pacific, but in Europe, the only U.S. ground troops in the fray were a few American Army Rangers that accompanied Canadian and British units into a bloody ambush at Dieppe, France. The Second Front idea passed into the future after Dieppe.¹³

Winston Churchill flew to Moscow on 12 August, intending to disabuse Stalin of any hope for a Second Front in 1942. The meeting that night dripped gloom as the British Prime Minister broke the bad

news. Stalin countered by proposing possible British alternatives against Cherbourg, France or the Channel islands. All Churchill could offer was TORCH, and that North African operation would not commence until November. By the 13 August meeting, Stalin resorted to outright invective, accusing the British of cowardice. Both leaders fumed in solitude, meeting again on 16 August. At that meeting, calm prevailed, with Stalin reconciled to going it alone for 1942. The Soviet generalissimo assured Churchill that Baku would not fall, and hinted knowingly about a coming "counter-offensive on a great scale."

¹⁴ The Prime Minister left Moscow convinced that the Soviet Union would survive BLAU.

With Churchill travelled the Chief of the Imperial General Staff, Field Marshal Sir Alan Brooke. Sir Alan conversed with Marshal Kliment E. Voroshilov, Deputy Commissar of the State Defense Committee and Marshal Boris M. Shaposhnikov of the Red Army General Staff. At that meeting, they discussed an Allied air element for service in the defense of the Baku region. Though Voroshilov favored the idea, neither side committed itself to a definite offer. The soldiers had no such authority.¹⁵

However, Winston Churchill saw in a Caucasus Air Force an answer to his confrontation with Stalin. Churchill wrote to General Sir Hastings Ismay, Chief of the Air Staff, on 19 August. In his directive, the Prime Minister ordered Ismay to begin preparing a study to place an Allied Air Force in the Caucasus. Churchill listed his reasons for the action in order of precedence. First, the Caucasus aviation would strengthen Russian airpower, which was presumed to be rather weak and known to lack a strategic bomber force. Second, the air units would act as an "advance shield" for Persia (Iran), a British area of interest. Third, Churchill hoped for the "moral effect

of comradeship," which the British leader trusted could atone for the Murmansk convoy situation. Fourth, the deployment would not be a dispersion of strength but a widening of Allied aerial options to draw the Luftwaffe thin.¹⁶

This concept, which came to be called VELVET, was transmitted to the American government on 29 August, 1942. The American military people studied the proposal and rejected it flatly. General George C. Marshall, Army Chief of Staff (and spokesman for the Army Air Force) recommended disapproval. Marshall told the President that VELVET was a diversion of assets needed for America's embryonic strategic air force in Europe. Marshall noted that concentration of logistics and forces improved AAF cohesion and combat power; VELVET would harm that by drawing out parts of the AAF. The Army Chief of Staff also remarked that VELVET would snarl the Iranian Lend-Lease lanes with AAF supplies, particularly serious considering the Murmansk troubles. VELVET could not be in place until January, 1943. The steppe winter weather was another negative factor. Finally, Marshall noted that VELVET aircraft and crews were "not likely to contribute more decisively" in the USSR than they could in North Africa. Marshall stated that if the British wanted VELVET, they should supply the units. The AAF could fill in for the transferred RAF in Egypt.¹⁷

The Army's strident objections to VELVET had some organizational rationale. For one thing, in the summer of 1942, Army Major General Follet Bradley entered the USSR with Soviet permission to finalize the Alaska-Siberia Lend-Lease route. Stalin had agreed to a U.S. inspection of Soviet airdromes in Siberia as landing sites for American aircraft shipments. The Army, the State Department, and even the President assumed that Bradley's mission (cover-named BAZAAR)

could be a forerunner for introduction of USAAF bombers in the same area in order to hit Japan. BAZAAR seemed a likely Soviet reciprocation for Lend-Lease, without the bother of VELVET. Army Assistant Chief of Staff for Operations Major General Thomas T. Handy voiced a second objection, based on doctrinal grounds. His staff work showed that dispatching heavy bombers to the USSR could derail the fledgling Combined Bomber Offensive, and this formed the core of Marshall's arguing position.¹⁸

This military advice compelled Roosevelt to mull the Churchill proposal throughout the month of September. Churchill grew more emphatic about VELVET, especially after September's PQ-18 shipment suffered heavily. By 22 September, the British decided to tell Stalin once and for all that the convoys were off until January, 1943, a prospect that would not gratify any of the Soviet leadership. With the Germans still advancing (slowly) on a wide front, Churchill was unwilling to suspend the convoy program without having VELVET ready as a substitute. The American President suggested Churchill hold the bad news for ten more days, then present it in tandem with the VELVET plan. Churchill consented to this subterfuge, simultaneously ordering General Ismay to finalize the timetable and details for the Caucasus force.

The final VELVET outline (Figure 1) comprised a force mix of US and British air groups and squadrons, with the RAF providing most of the package. Task group leadership devolved upon British Air Marshal D. C. S. Evill. Even though the RAF was the preponderant portion of VELVET, some American generals objected a bit to British command. Planners intended the Caucasus air force to answer to Soviet strategists, while retaining full internal command structure and a right to appeal to the British government. It was a hybrid

Figure 1

The VELVET Proposal: October 1942

The Mission : Help USSR defend the Caucasus region by bombing tactical objectives designated by the USSR military authorities.

Command : British Air Marshal, under overall Soviet Command with right of appeal to British government.

Organization : One U.S. Bombardment Group (376th BG, B-24 bombers)
 One U.S. Air Transport Group
 Three U.K. Light Bomber Squadrons
 Two U.K. Medium Bomber Squadrons
 One U.K. Long-range Fighter Squadrons
 Eight U.K. Short Range Fighter Squadrons

SOURCES: Winston S. Churchill, The Second World War, vol. 4: The Hinge of Fate (London: Cassell and Co., Ltd., 1951), pg. 506-507; Department of State, "Communication, Ambassador William H. Standley to V.M. Molotov, No. L-15," 12 October 1942, Foreign Relations of the United States, Diplomatic Papers, 1942, vol. III, Europe (Washington, D.C.: United States Government Printing Office, 1961), pp. 733-734; Richard C. Lukas, Eagles East (Tallahassee, Florida: Florida State University Press, 1970), pp. 151-152.

organization; nothing similar existed. By October, General Marshall reluctantly approved, since the training U.S. fliers might gather under VELVET was somewhat preferable to the shipment of even greater numbers of Lend Lease aircraft to build Soviet air power.

Despite his generals' misgivings, the American President made a "firm commitment to put an Air Force in the Caucasus...not contingent on any other" activity on 5 October, 1942. Roosevelt then cabled Stalin by 9 October, promising that the AAF would move "as rapidly as possible" to put an Air Force in the Caucasus. But by now, the September delays had given Churchill time to think things over, and the British Prime Minister was no longer so sanguine about an immediate push for VELVET. With a big battle shaping up in the North African desert, the British military staff chiefs advised against the plan until Egypt was cleared of Rommel's forces. After the other PQ runs had ended in carnage, Churchill decided that convoy PQ-19 was a dead issue until January, 1943 due to the pressure of impending TORCH shipping requirements. But the British Prime Minister no longer saw VELVET as a necessary substitution for the suspension of Murmansk supply missions. The British needed their airplanes for other things. Still, Churchill went through with the scheme. ¹⁹

As for the recipient of this offer, Josef Stalin seemed unimpressed. On 5 October, Stalin telegraphed to Churchill that the "Stalingrad area has deteriorated." His reply to the 9 October VELVET proposal was a curt, inscrutable "thank you," and nothing else. Stalin knew what his Western Allies did not, namely, that Operation BLAU had split the German Army Groups too far apart. Hitler's generals invited Soviet flank attacks by filling the gaps with unreliable Axis allied formations from Rumania, Hungary, and Italy. The Stavka concocted a plan for November called URANUS. This venture was arranged to cut off

the Germans bogged down in Stalingrad and slice the supply lines and retreat routes of the weary panzer troops away in the Caucasus foothills.²⁰ URANUS could turn a Soviet tactical defeat into a strategic advantage, and its promise pretty much negated any real strategic need for a VELVET force, especially one that would not arrive until January, 1943. So Stalin was slow to respond to the proffered support.

President Roosevelt chafed during the October wait. The great VELVET presentation had drawn a brief, tactiturn response, and the glacial pace of Soviet-Western diplomacy did little to assuage the American chief executive. True, on 6 October, Molotov had approved the long-sought General Bradley mission to survey the Siberian airfields, and BAZAAR seemed likely to get underway by 27 October (it did not). There was no immediate acknowledgement to an explanatory transmission on 19 October which informed Stalin that VELVET could not begin until January, 1943. The American President wrote to Churchill about their frustrating Communist allies: "I have decided they do not use speech for the same purposes as we do." Roosevelt concluded with "I want us to be able to say to Mr. Stalin that we have carried out our obligations one hundred percent."²¹ This comment is ironic indeed when one examines the cumulative effects of a postponed Second Front, suspended Murmansk supply shipments, and the lukewarm nature of the final VELVET proposal. The Anglo-American design projected a January, 1943 operational date, linked to progress in North Africa. At least that front had stabilized in mid-October after a major British success at El Alamein. Still, even January was a tentative time frame.

On 27 October, the first hint of movement came, when V.M. Molotov added a remark about his interest in the Caucasus air force even as he again set back the BAZAAR inspection of Vladivostok regional airdromes. On 8 November 1942, Stalin accepted VELVET. The Western Allies put together a coordination team, with Air Marshal Sir R. M. Drummond of the RAF and Brigadier General Elmer E. Adler (Commander, 9th Air Service Command) as the senior members. These military envoys landed in Moscow on 21 November, 1942, following an exhausting flight.

The two airmen were surprised the next morning when they finally met with Lieutenant General Feodor Falalaev, Chief of the VVS Staff. Falalaev stated that he had never heard of VELVET. This shocked Drummond and Adler, though they regained their composure and presented the extensive Allied supply requirements to the grim Red Air Force staff officer and his associates. Adler estimated that it would require 30,000 tons of supplies, to be moved at five hundred tons a day for sixty days. Falalaev expressed serious doubts about sustaining this build-up on the already overloaded Persian Gulf Lend-Lease network. The meeting adjourned with nothing decided.²²

The situation at the next meeting, on 24 November, degraded further. Falalaev started off by saying that the VVS would only accept the VELVET planes without crews. The VVS men would discuss no other points. Frustrated, Drummond and Adler left.

Still, General Adler saw some prospective advantages in VELVET, or a proposal like it. He wrote that he was "impressed" by the "military advantages" provided by USSR bases in raids on Eastern Europe, and even cabled Marshall that, if VELVET went through, the USAAF should insist upon the right to bomb strategic targets in Eastern Europe. Adler noted additionally, that as for the Caucasus,

"the territory is to Central Europe as Vladlivostok is to Tokyo," a portentous comparison.²³ A year before the formal proposal, Adler had advocated the basic components of FRANTIC in a linked framework.

Adler also complained that the Russians displayed a "cavalier attitude" about VELVET. After the 28 November conference, things really became testy. General Falalaeu bemoaned the continued delays on VELVET (the supply buildup alone would last almost to February, even under ideal conditions. Air Marshal Drummond laid the blame on Molotov for taking almost a month to accept the proposition. This exchange advanced nothing but blood pressures, so Drummond cooled a bit and got into a more specific point. The RAF officer queried the Soviet airmen about the possibility of an airdome survey in the Caucasus region. Falalaeu responded by demanding a formal diplomatic application for such an inspection tour. The VVS officers restated their interest in planes, not crews, and remarked that they would accept integration of U.S. and British aircraft and fliers into existing VVS units. This effectively broke off the 28 November meeting.

On 5 December, 1942, the wary officers gathered again for a fourth negotiating session. The Soviet general and his assistants argued that VELVET units were not needed to defend the Caucasus, as military strategy would no doubt impell an eventual transfer of these forces elsewhere once the Soviet main effort moved to another sector. The resultant confusion as new bases and agreements were made up would make the VELVET force a drain, not a boon, to Soviet war planners. The only answer, said General Falalaeu, involved a direct transfer of the planes earmarked for VELVET to the Red Air Force, with or without pilots. The American General Adler agreed that the Russians were

correct in a purely military sense, though he did not voice his opinion at the bargaining table.²⁴

These final Soviet positions were cabled to London and Washington, where military staffs almost immediately recommended disapproval. American airmen drew up two principal reasons to scuttle any attempt to hand VELVET planes over to the Soviet VVS. First, planes without fliers essentially equalled more Lend Lease, providing nothing to the USAAF's training or operations. General Marshall had finally approved VELVET to avoid that very situation. Secondly, any mixed Soviet American force seemed innately unworkable, given language barriers, technical differences, and a great variance in aerial operating procedures. Churchill summarized his service chiefs' ideas, noting that since the Russians were winning without VELVET, the costs appeared far too high for a minimal return. Thus, both Western Allies rejected the Soviet version of VELVET in December, 1942.

Molotov issued his formal "no thank you" as Drummond and Adler prepared to leave the USSR. The People's Commissar for Foreign Affairs explained that VELVET took much too long to propose and still was nowhere near ready, and that it would quite likely tie up the vital Iranian Lend-Lease channels. On 22 December, Colonel General A. V. Nikitin, deputy commander of the VVS, signed the official military reply that courteously told Drummond that VELVET was not wanted. Exasperated, Drummond included in his report the blunt remark: "They never intended to proceed with the project."²⁵ The British gave up.

But Adler's report to Washington, including his favorable impression of the VVS and the strategic possibilities of American operations from the USSR, led to some final attempts by President

Roosevelt himself. Aware of Molotov's refusal, on 16 December Roosevelt asked Stalin to "please" reconsider the issue, and accept the original VELVET force structure. Stalin reiterated the now standard line: he wanted aircraft, or else planes and crews, for the Red Air Force. Roosevelt changed course a bit, and sent Stalin a missive on 30 December promising one hundred bombers for Siberia if Japan attacked, and asking once more for permission for General Bradley to look at Siberian air facilities. This time, BAZAAR was not concealed in Lend-Lease, since the brusque Soviets had not only avoided allowing American landings in Siberia, but had instead shifted to picking up U.S. planes in Fairbanks, Alaska. Bradley had yet to look at any Russian facilities. So now the question of Siberian basing for American bombers against Japan was connected to VELVET, the Lend-Lease ploy having backfired.

No answer came back, so the President tried again, commenting in an 8 January, 1943 telegram that American airplanes could serve best in organized units, and repeating the request for a Siberian airbase survey. Stalin replied this time, answering in a biting transmission on 13 January, 1943. The Soviet leader noted that he needed "airplanes without aviators," since he had an ample supply of pilots already available. As for the Far East, Stalin observed no imminent threat from Japan, though he would accept one hundred crewless four-engine bombers "on the German-Soviet front where the need for air assistance is especially sharp." Finally, the Russian premier ended the hopes for Bradley's examination of air sites around Vladivostok; he said President Roosevelt should know that only Russian officers can inspect Russian VVS facilities. This truly buried VELVET.²⁶ The tough answer shelved the Siberian proposal as well, though this idea was now

hooked directly to any U.S. bomber bases in European Russia.

In a related decision, the Soviets decided on 3 March 1943 that the British RAF squadrons around Murmansk had outlived their usefulness. In a secret memorandum, the Russians ordered a halt to any prospective British build-up and directed the RAF to prepare departure plans. The telegram said Russian VVS units could handle the convoy escort duties. The sole Western combat elements in the USSR (discounting the single Free French Normandy volunteer fighter aircraft regiment integrated into the Red Air Force in 1942) got ready to leave.²⁷ The Soviets no longer needed such direct help.

This illustrates why VELVET failed to win Soviet approval. Things had changed dramatically in the Russo-German conflict. The major reason the Caucasus concept foundered involved the lengthy delays on all sides in devising, presenting, and discussing the plan. While Roosevelt and his generals explored the negative side of VELVET and then joined with their British colleagues to derive and send the project schematics to the USSR, Stalin and his Stavka drew up an outline for URANUS. The big URANUS offensive would secure the Caucasus and break the German Army for good, and it kicked off on 19 November, 1942 with immediate, encouraging gains. By 21 November (when Drummond and Adler finally got to Moscow), the crucial situation in front of the Caucasus was a Nazi problem, not a Soviet one.²⁸ VELVET seemed unnecessary to the Stavka, and they said as much through General Falalaev.

Stalin's unqualified, outright refusal of offered aid showed how much the Russians had accomplished on their own. Without PQ freight supplies in the north, a Second Front, or a borrowed British American air task force in the Caucasus, Stalin's armies stopped and defeated

Germany's Operation BLAU. This situation already existed by the time the Drummond mission made it to Moscow. As even Adler admitted, VELVET basing presumed a Soviet military posture backed up against the Caucasus.

The slowness with which VELVET developed certainly had its roots in American military displeasure over such a strategy. Like Molotov, George Marshall also worried about the effects of the massive VELVET buildup on Persian Gulf Lend-Lease shipments. Like their Soviet counterparts, the American generals saw the Caucasus proposal as a cumbersome diversion. Diverting AAF components could only weaken the Combined Bomber Offensive in Europe. Though Adler's report buttressed General Henry H. Arnold's belief in positive aspects available in a USSR basing concept, the bad news far outweighed the good. VELVET looked like poor strategy to the American generals, though perhaps worthwhile if the Soviets conceded Siberian air bases in return.

Yet, all these same military objections to the unlamented VELVET idea had changed very little by October, 1943. But by then, it was the United States military, specifically the USAAF, that wanted Russian bases for their own purposes. The vicissitudes of the Combined Bomber Offensive led to a search for strategic solutions, and General Adler's comment in his final report on VELVET noted that the fine strategic advantages created a "situation that leaves the question open at a later date for rediscussion..."²⁹ By October of 1943, "a later date" had arrived.

The High Costs of Daylight Bombardment

The day Winston Churchill concluded his meeting with Josef Stalin,

a tiny formation of twelve B-17 bombers crossed the English Channel to bomb a railroad marshalling yard in Rouen, France. Led by Brigadier General Ira C. Eaker (Commander, 8th Air Force Bomber Command and later a Lieutenant General), who piloted a bomber named Yankee Doodle, the planes caused minor damage. Unlike the ill-fated HALPRO Ploesti strike of June, 1942, Eaker's men and planes returned without loss, formally opening the American phase of the Combined Bomber Offensive.³⁰

The Combined Bomber Offensive (CBO) per se did not exist officially until 10 June, 1943. However, the bombing strategies of the RAF Bomber Command and USAAF 8th Bomber Command complemented each other from the start, albeit by pure chance. The British had tried daytime raids and switched to flying in darkness to avert extremely high losses, and the RAF designed tactics, planes, and training for such night missions. The Americans zealously desired to conduct precision strikes in the sunlight, avoiding collateral damage to nearby civilians through careful use of the marvellous Norden bombsight. American adherence to this concept bordered on a missionary fervor. The RAF figured the more dead Germans the better, and stuck with massive "area raids." Both sides thought the other ineffective, and until the January, 1943 Casablanca Conference, the small 8th Bomber Command was on the verge of conversion to a night force due to lack of numbers, if nothing else. (Hence, Marshall's adamant opposition to VELVET as a dilution of needed bomber strength.) But Casablanca rationalized the whole doctrinal disagreement under the guise of "bombing around the clock." General Henry H. Arnold's well-turned phrase saved the American daylight doctrine, and the conflicting systems merged into a dual plan. Titled POINTBLANK, this

bomber offensive "combined" RAF and USAAF capabilities against a jointly selected series of German targets. It would take until June to hash out all the details of target priorities.³¹

The Allied Committee of Operational Analysts (code-named JOCKEY) included American intelligence officers trained in what would later be called "systems analysis." Assisted by RAF intelligence specialists and representatives of the British Ministry of Economic Warfare, JOCKEY agreed on a list of twelve target arrays, and initially listed them as: the German Air Force and its industries, ball bearings, petroleum, grinding wheels/crude abrasives, non-ferrous metals, synthetic rubber, submarines, military motor transport, the rail/highway/canal transportation network, the coking industry, steel and iron production, and machine tools. Given that there were finite limits on airplanes, crews, bombs, and especially time (with the opening of the Second Front, OVERLORD, plotted for May-June 1944 looming large), the group proposed a four tier grouping of things to bomb. (Figure 2) The German Air Force had to be nullified or OVERLORD would fail, and in 1943, U-Boats were still a significant problem. The priorities could (and would) change, but the twelve basic systems still set the agenda for the bombardiers.³²

Deciding what to strike was only half the problem. The other half was carrying out the guidance, and this proved much harder than anyone supposed at the outset. Through the rest of 1943, the 8th Bomber Command demonstrated just how hard it was to bomb Occupied Europe in daylight. Changes had to be made in proposed American bombing techniques to assist in bomber defenses, with a resultant degradation in bombing accuracy. The Northern European weather turned up overcast as often as not, reducing bombardment to radar-assisted guesswork or

Figure 2

POINTBLANK: The Combined Bomber Offensive
10 June 1943

1. Intermediate Objective: The German Air Force
2. Primary Objectives:
 - a. U-Boat building yards/bases
 - b. The rest of the German aircraft industry
 - c. Ball Bearings
 - d. Oil
3. Secondary Objectives:
 - a. Synthetic Rubber and Tires
 - b. Military Motor Transport Vehicles

Other Targets: Grinding Wheels/Crude Abrasives, Non-ferrous metals, the transportation system, coke production, steel/iron, and machine tools.

SOURCE: Wesley F. Craven and Jerome L. Cate, The Army Air Forces in World War II, vol. 2: Europe: TORCH to POINTBLANK, August 1942 to December 1943 (Chicago: University of Chicago Press, 1949), pp. 356-361, 367.

cancelling important missions. Crews and planes were far below authorized strengths, with trained crews the greatest shortage. Due to crew shortfalls, maintenance delays, and combat damage repairs, a force of 775 bombers in June only had 222 ready for combat.

The big problem ended up being the vicious Luftwaffe opposition, in the form of antiaircraft flak guns, swarms of skillfully flown fighters, expert fighter direction using radar stations, and use of blast walls, camouflage, and smoke screens to mitigate bomb precision and effects. As the 8th Air Force B-17 "Flying Fortresses" and B-24 "Liberators" pressed into Germany to hit the important POINTBLANK targets, they outran the range of the available fighter escorts. This did not alarm the USAAF commanders; supposedly the American bombers were built to survive and fight back. Though heavily armed with big machine guns in powered turrets, the slow, unmaneuverable four-engine bombers took heavy losses on almost every deep raid into Germany. Bombing never quite came up to standard, either, with a mere 12.7 % of bombs striking within a thousand feet of aim point by June, 1943. Afflicted by German fighters that often landed, rearmed, and bored in again and again over the Reich, the big planes proved unable to sustain the Combined Bomber Offensive.³³

The rate of loss and disappointing bombing accuracy limited progress toward erasing the POINTBLANK target systems. General H.H. Arnold in Washington relentlessly pressured the newly promoted Major General Ira Eaker, now 8th Air Force Commander. But in England, bomber pilots wrestled daily with the widening gap between the concept of daylight precision attacks and the dangerous reality in the skies of Europe. Arnold fired cable after cable to Eaker in the summer of 1943, ordering him to "toughen up" and "can these fellows who cannot

produce."³⁴ Like the U.S. Mail, the 8th Air Force had to "get through."

But willpower was not the problem. The 8th Air Force disposed only 65% of the planes it had been promised to conduct its CBO role, and the crew shortage further slowed the pace of operations. Eaker's continual maintenance problems led Arnold to suggest with sarcastic overstatement that there was little point in shipping more bombers to England, as the 8th Air Force could not keep what it had in operational condition. Arnold flatly noted that the best quick solution would be to fire the current logistics chief and designate a new Air Service Command leader. The USAAF Commanding General in Washington did not conceal his distress over 8th Air Force's bombing troubles, even telling diplomatic envoy W. Averell Harriman that Eaker's procedures and organization were proving unsatisfactory.³⁵ Arnold's impatience and propensity to axe those who could not measure up spurred Eaker and his staff to try several innovative methods to solve their problems. The rate of "big" missions increased, reaching a crescendo between 1 August to 14 October 1943.

Material improvements occurred. The B-17s and B-24s sprouted extra guns (in place of bombsights, which were stripped out of all but the lead craft). P-47 "Thunderbolt" and P-38 "Lightning" fighters were furnished with auxiliary drop tanks to extend their range, but the fuel pods leaked at high altitudes. A set of thirteen B-17s were converted to YB-40 flying gunships, disposing additional turrets and heavy armor plating. The YB-40s looked good, but the hasty engineering involved showed through when the overburdened planes could not keep in formation with standard USAAF bomber airplanes. They flew but a few

missions in July of 1943 before being grounded. The machine needed to solve the bomber defense equation existed (and had existed a year before), but the USAAF had assumed their big bombers would not need long-range fighter escorts. So the P-51 "Mustang" fighter did not go into full production until 1943, and the first units could not reach England until December, 1943. With Arnold breathing fire and the CBO behind schedule, Eaker's men elected to operate without the fine "Mustang" escorts.³⁶

Organizational improvements were tried as well. Eaker created Bombardment Wings (1st and 4th) to standardize training and assist in controlling the increased tempo of raids. Major General Hugh Knerr, a recognized mechanical troubleshooter sent to be the Service Command leader, concocted a scheme that dispatched repair squads to damaged bombers, rather than pulling such aircraft back to central collection and rebuilding areas. Training in bombardment techniques and air to air gunnery increased, as did bad weather and formation flying hours.³⁷

August saw combat tests for two experimental tactical procedures. On 1 August, 1943, 178 B-24 "Liberators" (without fighter support) took off from North African bases. The 8th Air Force provided three of the bombardment groups, and extensive rehearsals prepared the entire formation for a daring, low-level strike on HALPRO's old destination, the oil installations of Ploesti, Rumania. Code-named TIDAL WAVE, the tree-top level approach skirted German radars but ran right through the teeth of the Nazi flak and fighter defenses. The detailed attack outline degenerated into a confused mess of flaming oil storage tanks, burning "Liberators", late arriving and lost USAAF groups, and very heavy American casualties. Fifty four B-24s did not return, and

bombing results spilled a lot of stored oil and burned it, though the refineries remained fully intact and productive. The fiasco prompted General Dwight D. Eisenhower to state: "As usual, mathematical calculations could not win over unexpected conditions."³⁸

The other tactical invention featured the first large-scale "shuttle" operation. Billed as an "anniversary special" (commemorating the 17 August, 1942 inaugural flight to Rouen), Eaker's 8th Air Force developed an intricate aerial maneuver in order to strike two targets at the top of JOCKEY's priority lists: the Messerschmitt Aircraft Plant in Regensburg and the ball bearings factories around Schweinfurt, both deep in Germany. The idea of the "shuttle" bears consideration, since it offered the only major use of the technique before FRANTIC.

The battle plans for 17 August envisioned two wings of B-17s, with the 4th Bombardment Wing in the lead to "clear the way" and hit Regensburg. The bigger 1st Bombardment Wing intended to follow fifteen minutes behind the 4th, passing over the Luftwaffe interceptors as they refueled and rearmed after tangling with the forward wing. 1st Wing would proceed onward to Schweinfurt. Meanwhile, 4th Wing was slated to spin south, an unorthodox move that would disrupt German reactions. The 4th planned to fly to North Africa over the Alps, leaving the 1st to fight its way home over the usual direct route, hopefully across a weakened German fighter arm split in two directions. As an added bonus, the 4th Bombardment Wing proposed to strike some enemy facilities on the way back to England.³⁹ If it all worked, loss rates would be halved, since the lead wing would absorb all the inbound damage and the trail wing should suffer only outbound effects. As in the TIDAL WAVE raid, timing was the key to

everything.

Unfortunately, like the Ploesti operation, the Regensburg-Schweinfurt blueprints went awry. English fog intervened, and the 4th Wing took off while the 1st Wing sat tight for a few hours. As a result, both forces took heavy casualties in men and planes, with a total of sixty bombers destroyed of 376 committed. Initial intelligence analysis indicated that the Regensburg raiders bombed more effectively than their compatriots, and that the shuttle to Africa reduced losses dramatically on the outbound leg. On the negative side, the austere African airdromes could not fix eight damaged B-17s due to a lack of tools and parts.

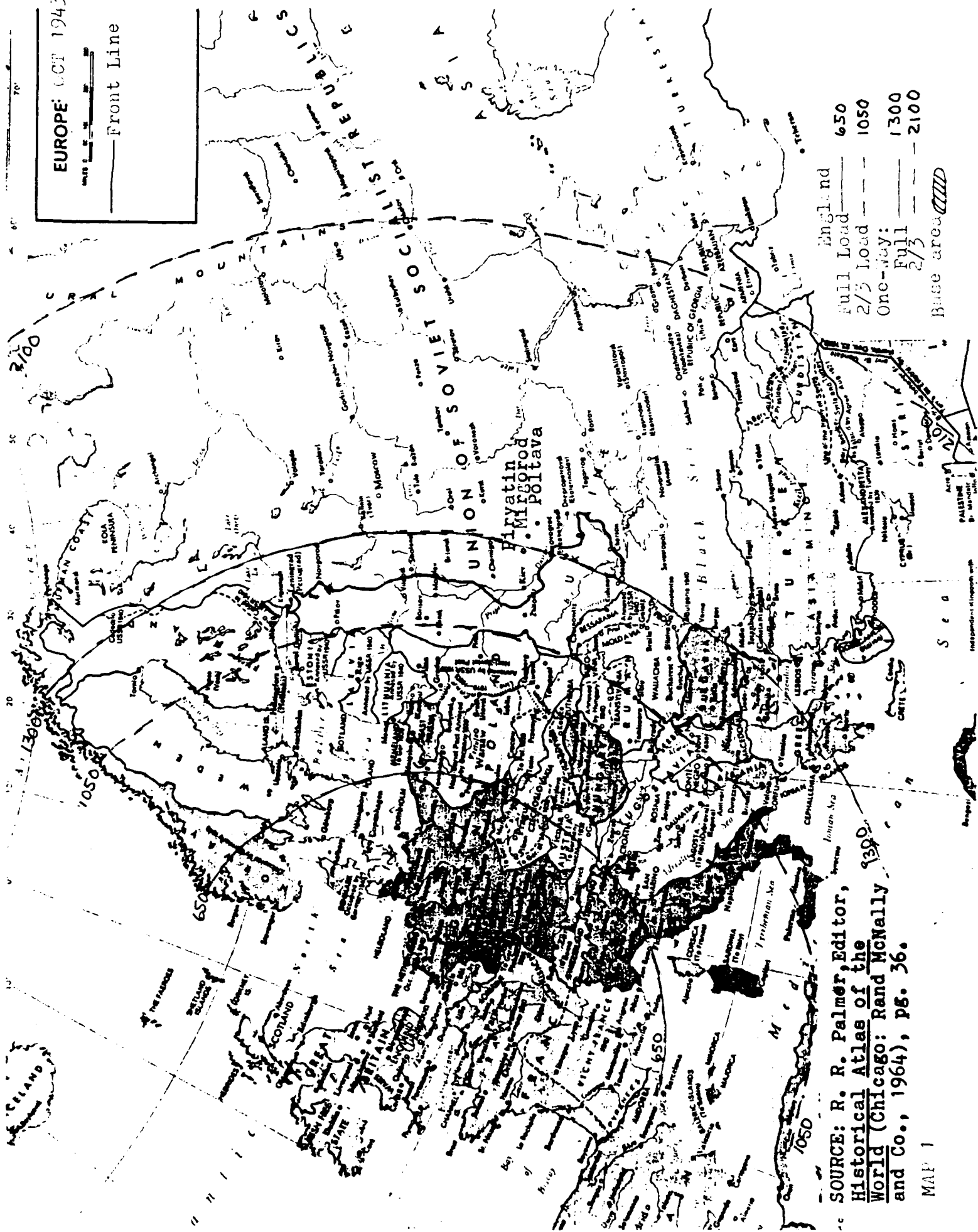
The Schweinfurt side of the raid had gone so poorly (bad bombing, high losses) that "instant analysis" seemed to paint a bright picture of the Regensburg to North Africa "shuttle" section. Colonel Curtis LeMay commanded the "shuttling" 4th Bombardment Wing, and his stringent training standards and insistence on proper formation flying and tight bomb patterns probably did more to reduce losses than the unusual departure angle. Later checks of the Regensburg plant discovered that, though many roofs caved in, production continued after a brief hiatus. The bombs used had been well-aimed, though too few and too small. The popular belief that "shuttling" cut friendly aircraft destruction figures also proved specious. Actually, LeMay's men had lost the same proportion of their numbers (about 16%) as the unlucky Schweinfurt wing, though absolute loss numbers were smaller because 4th Wing was smaller. Adding in those planes that did not return from North Africa and those shot down enroute to England from Algeria, and LeMay's total aircraft casualties ran up to 63 B-17 bombers, a whopping 43%.⁴⁰ But, at the time, and by comparison

to TIDAL WAVE or the conventional Schweinfurt strike, the 4th Wing's "shuttle" appeared to offer a possible answer to American bomber commanders. By the first week in September, 1943, the ever-impatient General H.H. Arnold turned to his air staff chief Major General Barney M. Giles, and asked him to reopen the files on Russian airfields and study the possibilities of using such bases for "shuttle" raids.⁴¹

However, the different alterations of American equipment and methods tried in mid-1943 did not change the overall situation. From 1 August until 14 October, 1943, unescorted American bombers flew on but twenty five of seventy five possible days, limited in the main by foul weather. Only ten of these raids hit targets in Germany proper. Bomber operational ranges and load carrying limitations made it hard to bomb all important targets from England. (Map 1) Out of a force of 881 bombers and 661 crews, Eaker put up a maximum of 407, averaging around 325 planes. Remember, this was the 8th Air Force maximum effort.

The "big push" climaxed from 8 through 14 October, 1943, known later as "Black Week." The 8th Air Force struck Germany on the 8th (Bremen submarine yards), 9th (Marianburg/Anklam aviation factories), 10th (Munster railroad center), and 14th (Schweinfurt ball bearings again). 1410 bombers lifted off, and 148 did not return, a loss rate of over ten percent. Bombing had improved (27.2 % landed within a thousand feet of the aiming point), but the cost was unacceptable. Eaker sent a cable full of fight to Arnold, claiming the 8th Air Force had their "teeth in the Hun's neck." Arnold was elated, publicizing the bombing results widely to Congress and newsmen and asking Eaker if he saw real signs of an imminent Luftwaffe "collapse." Instead, the 8th Air Force did the collapsing, drawing back from deep, dangerous

Front Line



England
Full Load — 650
2/3 Load — 1050
One-Way: Full — 1300
2/3 — 2100
Base area *and*

SOURCE: R. R. Palmer, Editor,
Historical Atlas of the
World (Chicago: Rand McNally
and Co., 1964), pg. 36.

MAP 1

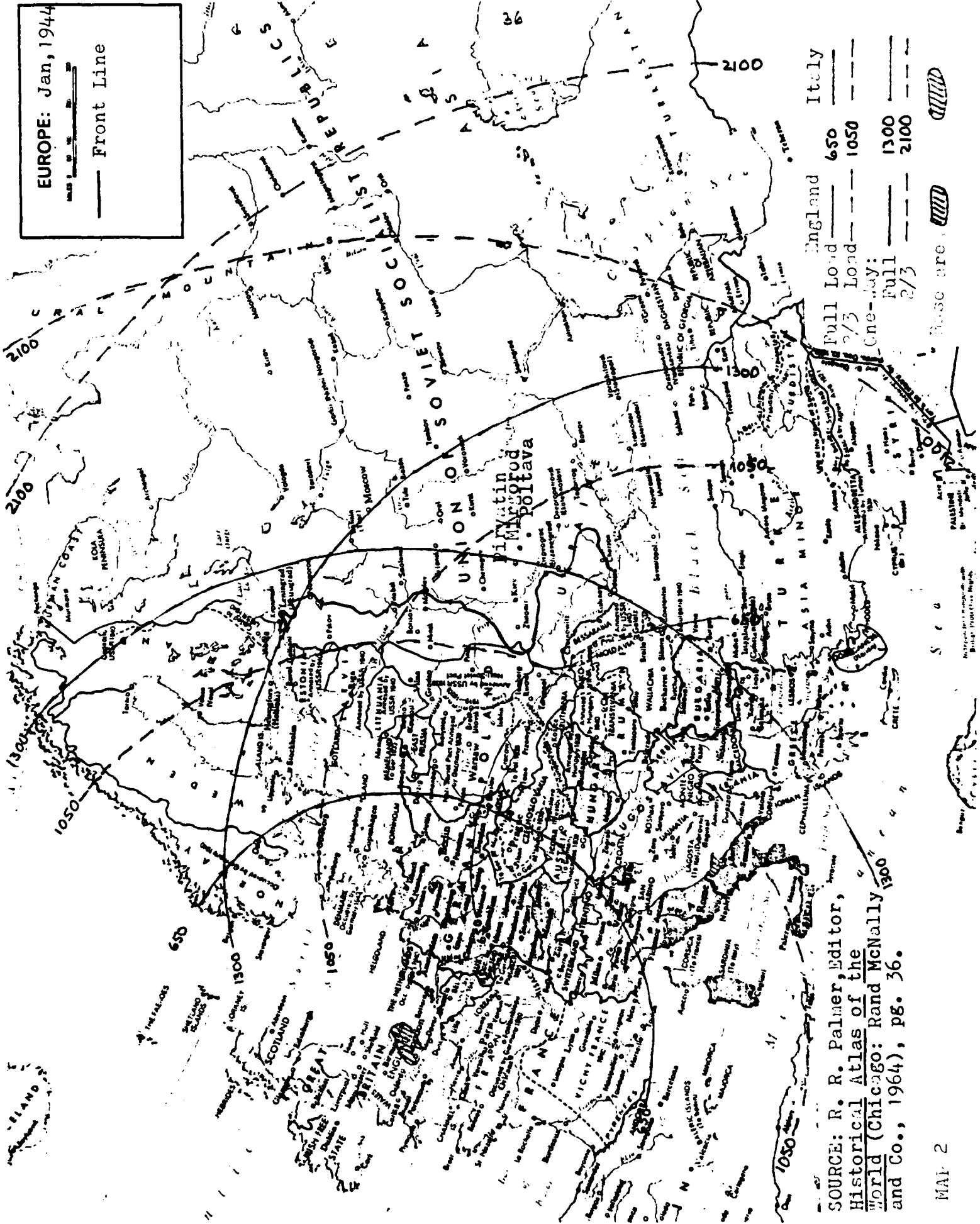
targets to await the arrival of the P-51 "Mustangs" and replace its crew and plane losses. As a consolation, outrageous German fighter casualty claims received poker-faced acceptance, although British RAF intelligence pointed out that American bomber gunners alone had credited themselves with more aircraft than the Luftwaffe had lost on all non-Soviet fronts to date. The 8th Air Force did not "go deep" again until early 1944. In the official AAF history, the authors asserted quite frankly that, for the time being, the USAAF had lost air superiority over central Europe.⁴²

"Black Week" culminated a year-plus of disappointment. General H.H. Arnold and his Washington staff officers cast about for ways to improve the situation in England. It had to be done swiftly, because defeating the German air groups constituted an essential prerequisite for opening a Second Front in May or June of 1944. POINTBLANK lagged at least "three months behind schedule", in the words of Air Chief Marshal Sir Charles Portal, Arnold's RAF counterpart. Arnold pursued several parallel strategies to solve the dilemma.

From the industrial side, the P-51 "Mustang" (with functional, sealed aluminum auxiliary fuel tanks) appeared for service in units, reaching England by the end of 1943. Additionally, B-17 production funnelled more aircraft to England, along with replacement crews and complete, formed bombardment groups. H2S and H2X radar bombing sets were installed to allow more foul-weather missions. On 1 November, a new Air Force (the 15th) set up shop in southern Italy, expanding the range of POINTBLANK system coverage and adding options to the JOCKEY analysts' target recommendations. (Map 2) The 15th Air Force would be ready to fly major assaults by January, 1944, enabling serious, repeated strikes against Balkan sites. As expected, Arnold applied his

EUROPE: Jan, 1944

Front Line



favorite solution to all problems, easing General Eaker out of his 8th Air Force role and into command of the less important (though organizationally equivalent) Mediterranean Allied Air Forces (MAAF).⁴³

One more item proceeded through the staffing process. On 5 September, 1943, General Giles sent orders to his operations subordinate, Brigadier General Laurence S. Kuter, to "prepare plans giving the discussions, findings, and recommendations on the employment of our heavy bomber force from Russian airports." General Giles guided Kuter by noting that such operations could create "a closer tie" between USA/USSR air forces, and assist "the political situation." Giles thought the USAAF could gain in another way, opining that "more missions could be accomplished during winter months than we have planned at the present time." (One wonders if General Giles had ever consulted a meteorologist or even a map showing the typical USSR latitude in relation to the Arctic circle.) Regardless, the wheels were set into motion.⁴⁴ When W. Averell Harriman and Major General John R. Deane stopped by Arnold's office before heading for Moscow, the USAAF Commanding General would be ready with a concrete proposal for the Russians.

CHAPTER 1

Notes

1. John Erickson, The Road to Stalingrad (Boulder, Colo.: Westview Press, 1975), pp. 181, 232; Vincent J. Esposito, The West Point Atlas of American Wars, 2 vols. (New York: Praeger Publishers, 1959), vol. II: 1900-1953, map 25, World War II.
2. U.S. Department of State, "Memorandum by Mr. Harry L. Hopkins, Personal Representative of President Roosevelt," 31 July, 1941 in Foreign Relations of the United States, 1941, 7 vols. (Washington, D.C.: U.S. Govt. Printing Office, 1958), vol. I: General, pp. 805-814.
3. Winston S. Churchill, The Second World War, 6 vols. (Cambridge, Mass: Houghton Mifflin Co., 1950), pg. 454; Joan Beaumont, Comrades in Arms: British Aid to Russia, 1941-1945 (London: Davis-Poynter, 1980), pp. 16, 44, 105.
4. Erickson, The Road to Stalingrad, pp. 266-274; Esposito, 1900-1953, map 28, World War II.
5. Russell F. Weigley, The American Way of War (Bloomington: Indiana University Press, 1973), pp. 270-271.
6. Henry H. Arnold, Global Mission (New York: Harper and Brothers, 1949), pg. 276.
7. John Costello, The Pacific War 1941-1945 (New York: Rawson, Wade Publishers, Inc., 1981), pp. 250-253.
8. Arnold, Global Mission, pp. 306-307.
9. Wesley F. Craven and Jerome L. Cate, The Army Air Forces in World War II, 7 vols. (Chicago: University of Chicago Press, 1949), vol. 2: Europe: Torch to Pointblank, August, 1942 to December, 1943, pp. 9-10; Leroy Newby, Target Ploesti: View from a Bombsight (Novato, Calif.: Presidio Press, 1983), pp. 54-55.
10. Weigley, The American Way of War, pg. 273.
11. Erickson, The Road to Stalingrad, pp. 355, 360-361; Esposito, 1900:1953, map 31, World War II.
12. Weigley, The American Way of War, pp. 319-320.
13. Winston S. Churchill, The Second World War, 6 vols. (London: Cassell & Co., Ltd., 1951), vol. 4: The Hinge of Fate, pg. 459; Erickson, The Road to Stalingrad, pp. 376, 399-400.
14. Erickson, The Road to Stalingrad, pp. 400-402.
15. Ibid., pp. 400-401.
16. Churchill, The Hinge of Fate, pg. 459.
17. Ibid.; "History of the Eastern Command, Chapter I, Strategy and Mission," 1944, USAF Historical Research Center, Record 522.01-2, Maxwell AFB, Alabama, pg. 29; Richard C. Lukas, Eagles East (Tallahassee, Florida: Florida State Univ. Press, 1970), pg. 145-146.
18. "Communication, Ambassador William H. Standley to U.M. Molotov, No. L-2," 19 June, 1942; "Communication, Ambassador William H. Standley to Marshal J.V. Stalin, No. L-3," 24 June, 1942; "Communication, Ambassador William H. Standley to Secretary of State Cordell Hull," 2 July, 1944; "Communication, Ambassador William H. Standley to U. M. Molotov, No. L-5," 9 July, 1944; all in Foreign Relations of the United States, 1942, 6 vols. (Washington, D.C.: U.S. Govt. Printing Office, 1961), vol. III: Europe, pp. 597, 599-600, 604, 607; Maurice Matloff, Strategic Planning for Coalition Warfare, 1943-44 (Washington, D.C.: U.S. Govt. Printing Office, 1959), pg. 70.
19. Churchill, The Hinge of Fate, pp. 506-507, 513-516;

"Communication, Ambassador William H. Standley to U.M. Molotov, No. L-14," 9 October, 1942; "Communication, Ambassador William H. Standley to U.M. Molotov, No. L-15," 12 October, 1942; both in Europe (1942), pp. 731, 733-734.

20. Churchill, The Hinge of Fate, pp. 517, 520; Erickson, The Road to Stalingrad, pp. 422-423.

21. Churchill, The Hinge of Fate, pg. 521.

22. "Memorandum, Llewellyn E. Thompson to Loy W. Henderson," 21 November, 1942 in Europe (1942), pg. 677.; Lukas, Eagles East, pp. 153-154.

23. Lukas, Eagles East, pg. 155.

24. Ibid., pp. 155-157.

25. Ibid., pg. 159.

26. "Communication, Loy W. Henderson to U.M. Molotov, 17 December, 1942; "Communication, Eugene H. Dooman to U.M. Molotov, No. L-26," 1 January, 1943 in Europe (1942), pp. 677, 683; "Communication, Ambassador William H. Standley to U.M. Molotov," 10 January, 1943; "Communication, Marshal J. V. Stalin to President Roosevelt," 13 January, 1943; both in Foreign Relations of the United States, 1943, 6 vols. (Washington, D.C.: U.S. Govt. Printing Office, 1963), vol. III: The British Commonwealth, Eastern Europe, the Far East, pg. 616.

27. "Communication, H. Freeman Matthews to Secretary of State," 10 March, 1943; "Memorandum, Loy W. Henderson to Ray Atherton," 15 March, 1943; both in The British Commonwealth, Eastern Europe, the Far East, pp. 633-635.

28. Erickson, The Road to Stalingrad, pp. 464-465; Esposito, 1900-1953, map 34 World War II.

29. Lukas, Eagles East, pg. 160.

30. Wilbur H. Morrison, Fortress Without a Roof (New York: St. Martin's Press, 1982), pp. 55-56.

31. Craven and Cate, Europe: Torch to Pointblank, pp. 356-373.

32. Ibid.; United States Strategic Bombing Survey, Aircraft Division Industry Report, Book 5 (Washington, D.C.: U.S. Govt. Printing Office, 1947), pg. 49.

33. Craven and Cate, Europe: Torch to Pointblank, pp. 697, 718-720.

34. Morrison, Fortress Without a Roof, pp. 123-126.

35. Ibid., pg. 126.

36. Ibid., pg. 134; Thomas Coffey, Decision Over Schweinfurt (New York: David McKay Co., Inc., 1977), pp. 194-195.

37. Thomas Coffey, Decision Over Schweinfurt, pp. 193, 194, 205.

38. Morrison, Fortress Without a Roof, pp. 147-154.

39. Martin Middlebrook, The Schweinfurt-Regensburg Mission (New York: Charles Scribner's Sons, 1983), pp. 29-31; Sovetskaya Voennaya Entsiklopediya, 1977 ed. s.v. "Chelnochnye Operatsiy" by M.N. Kozhevnikov.

40. Middlebrook, The Schweinfurt-Regensburg Mission, pp. 256-270.

41. General H.H. Arnold, "Handwritten 9/7 Note, with Annotations," 7 September, 1943, USAF Historical Research Center, Record 522.161-5, Maxwell AFB, Alabama.

42. Craven and Cate, Europe: Torch to Pointblank, pp. 695-704, 705, 710, 711, 719, 847-850.

43. Ibid., pg. 715, 720, 724; Thomas Coffey, Decision Over

Schweinfurt , pp. 311-313.

44. Major General Barney M. Giles, "Employment of Heavy Bombers from Airports in Russia," 5 September, 1943, USAF Historical Research Center, Record 522.161-5, Maxwell AFB, Alabama.

CHAPTER 2

PREPARING FOR FRANTIC

OCTOBER, 1943 TO JUNE, 1944

The Moscow Conference

The crisis in the air war over Germany in October, 1943 coincided with a major revision in American diplomacy vis a vis the USSR. Rear Admiral William H. Standley, the United States Ambassador to the Soviet Union since mid-1941, had reached the limits of his patience and usefulness in Moscow. A nautical man chosen for his friendship with President Roosevelt and his tough reputation, not for his skills in foreign service, Standley disliked his Communist allies intensely. Several times, most notably in March, 1943, Standley had exploded with vehement rage concerning some Soviet provocation. The Russians (particularly Molotov) returned this suspicious disgust. With the war in its middle phases and the prospect of combined Allied operations against Germany likely, Roosevelt (on the advice of Secretary of State Cordell Hull) determined to replace Standley.

The man chosen to fill the Ambassadorship in Moscow knew the Russians. Roosevelt's selection was his busy envoy, William Averell Harriman. Harriman had dealt with the USSR and its government as far back as 1926, when his family business had interests in a company called Georgian Manganese, near Tiflis, in the Caucasus. More

recently, Harriman had created the initial practical groundwork for the US/USSR Lend Lease network, meeting with Stalin in the fall of 1941. Harriman knew the Russian people as well as any American, and he had a keen concern in promoting American interests in the embattled USSR. Among his goals was more active military cooperation against Germany and, eventually, Japan. Harriman insisted that his arrival be used to establish a full Military Mission in Moscow, absorbing Major General Sidney Spalding's Supply Mission (the Lend Lease servicemen). A Military Mission outranked the more usual Military Attache already assigned to the Moscow Embassy.

Harriman filled his personal aide positions carefully, breaking Foreign Service regulations to elevate Charles E. "Chip" Bohlen and George F. Kennan, both of whom spoke Russian fluently. The new ambassador insisted that the War Department furnish a capable officer to head the new Military Mission, and he convinced General George Marshall to relinquish the Secretary of the Joint Chiefs of Staff, Major General John R. Deane (who also learned to speak Russian). With his team in place, Harriman and his group made the rounds in Washington before departing for the USSR.¹ It was important that all be well informed, since they faced big challenges right from the start. The day they got there, the new group would have to face a meeting of Soviet, British, and American ministers in Moscow. This conference of ministers was designed to set the stage for the first face to face summit meeting of Stalin, Churchill, and Roosevelt, set for late November, 1943 in Teheran, Iran.

The USAAF Commanding General was among the military officers making presentations to Harriman and Deane. Knowing that his listeners favored direct military actions in concert with the USSR, General

Henry H. Arnold presented his concept for shuttle-bombing from England/Italy to Russia and back. Arnold addressed Harriman and Deane even as his 8th Air Force bombers struggled through "Black Week," and the AAF commander's sense of urgency impressed both men. The AAF arguments neatly summarized the perceived military advantages of "shuttle" raids: all German targets would become vulnerable (even those deep in Eastern Europe), German air defenses could be spread out and redistributed (reducing the forces opposing incursions over the usual routes), and finally, the USSR airfields might allow more bombs (5000 pound bombload planned) to be dropped for less fuel expended, and even increase the capability to "get behind" bad winter weather that might block Italy or England. Ambassador Harriman and General Deane resolved to bring the proposal up at the earliest opportunity, and both men saw a larger opportunity in these operations. General Deane recalled his and Harriman's perceptions: "Bombing bases in Western Russia would be a proving ground for the vast American air operations which we visualized would later take place in Siberia." They assumed that every problem solved for European "shuttle" missions would save time when it came time to turn strategic airpower against Japan.² In this way, the objectives of the still nameless shuttle program fulfilled two somewhat contradictory requirements. Shuttle raids were but one conceptual military solution to the problem of obtaining air superiority over Germany to prosecute the Combined Bomber Offensive (and the Army Air Force pursued USSR bases at the same time it reorganized its strategic airpower, introduced the long-range P-51 fighter, established an Italian-based Air Force, and upgraded bad-weather bombing techniques). In a strictly military sense, Soviet basing need only be utilized as long it accomplished its

military goals, and if those goals were achieved by other means, "shuttles" could be dropped, much as the YB-40 "B-17 Gunship" and low-level TIDAL WAVE experiments were discarded.

However, Harriman and Deane saw the Russian airfield rights as the "proving ground" for a wider, grand strategic goal: American air operations against Japan from Siberia. Of course General Arnold favored that idea as well, since he had mentioned it to his British guest in December, 1941 and went so far as to direct its study on 21 September, 1943. The USAAF enthusiastically signed on to this "hidden" part of the shuttle proposal, though the initial USAAF planning directive on 10 November, 1943 strictly concerned itself with helping the bogged CBO against Germany to defeat the Luftwaffe before the May-June, 1944 Normandy invasion.³ At the time, nobody realized that such linkage could result in the pursuance of militarily unsatisfactory European operations merely to keep alive the promise of possible Pacific missions. From the start of serious consideration of US/USSR air operations in October, 1943, the Siberian option was used to justify the efforts in European Russia.

With Arnold's statements in their study folders along with many other pressing affairs, W. Averell Harriman and General Deane landed in Moscow on 18 October, 1943. The next day, both Americans entered into the busy schedule of the Moscow Conference, allowing no time at all to get acclimated to the USSR. The big meeting room was filled with representatives of the three major powers. The Soviet group included Molotov, A.I. Mikoyan (Commissariat of Foreign Trade), Marshal Klement Voroshilov (Deputy Commissar of Defense), Andrei Vishinsky (Vice Commissar of Foreign Affairs), and Lieutenant General A.A. Gryzlov of the Red Army General Staff. The British delegation was

under Foreign Secretary Sir Anthony Eden. Other members were Ambassador Sir Archibald Clark-Kerr and VELVET planning veteran General Sir Hastings Ismay of the Royal Air Force. Besides Harriman and Deane, the United States team featured Secretary of State Cordell Hull and Charles "Chip" Bohlen. On that first day, all three sides gave initial position papers.

The second day (20 October) featured military situation summaries, with General Deane presenting the American case. After a lengthy and optimistic review of American progress in the Pacific and the Mediterranean, Deane put special emphasis on the work of the Combined Bomber Offensive in preparing the way for the Second Front invasion. Deane did not go so far as British General Ismay, who referred to the RAF/AAF bombing efforts as a "third front" in the air, but the American did provide a flattering picture of bombing effectiveness. The depredations and disappointments of "Black Week," of course, were omitted. Deane concluded his remarks by boldly issuing three proposals, all related to Arnold's requests. First, Deane asked "that the Soviet Union make available bases on its territory so that American bombers could land, refuel, reload, and shuttle back to their home bases in the Mediterranean, hitting German targets as they came and went." The other two items supported the principal one, appealing for a fuller exchange of weather data (with upgraded communications to do so), and definition of a routine air transport system from the Persian Gulf. The Russian delegates looked thunderstruck, according to Deane, and ignored the proposal for two days. Molotov gave a verbal approval "in principle" on 23 October. This prompted Deane and Harriman to suspect that such activities required the direct approval of Josef Stalin.⁴

While other matters were discussed, the American group participated in several of the typically lavish Soviet State dinners. On 30 October, the state occasion featured toasts to gallantry from all sides, and Stalin confided to all present that not only would the USSR fight on successfully until the French invasion, but that he fully intended to move against Japan in strength once Germany had been crushed. In an undoubtedly intentional finale to the evening's festivities, the Soviets ran a propaganda film concerning the 1921 Japanese intervention in Siberia, replete with vicious anti-Japanese remarks that "delighted" Harriman and Deane. This meshed well with the new U.S. ambassador's hopes for Soviet aid against Japan. But as Deane warily recorded in his memoirs, both he and Harriman were reluctant to put too much faith in the displays of stage-managed Soviet social functions. They decided not to get taken in like the many "vodka visitors" who formed life-long opinions of the Soviets based on a few good food spreads and liquor arrays.⁵

The Americans got their wishes when the final Moscow Conference agreement's Most Secret Protocol included all three of Deane's proposals and the notation that Molotov "approved in principle," signed by all three delegations on 1 November, 1943. Deane decided to move immediately to get more concrete action before the Teheran conclave, scheduled for 28 November. Arnold had sent a telegram on 26 October (in light of the grim facts coming out of 8th Air Force headquarters after the October air setbacks), urging Deane to act. (Arnold was apparently unaware that Deane had done his part, and that the Soviets were considering the matter). Despite Deane's hopes, he could get no quick action out of the Soviet Army General Staff (which controlled the UVS). General Deane, proud of his quick work at the

Moscow Conference and feeling some working kinship with Marshal Voroshilov, fell into the "vodka visitor" trap and assumed he could disdain normal military procedures based upon his social contacts. He had heard from his predecessor that the Soviet liason system was quite time-consuming. Bypassing Major General E.V. Estigneev's Military Liason Office (OVS), Major General John Deane went directly into Marshal Voroshilov's office, pushing his way past a few guards only to discover Voroshilov was at the front. Embarrassed, Deane was forced to deal with the condescending Estigneev, whom he later described as "the original stuffed shirt." The OVS chief gloried in Deane's uncomfortable position, but arranged a meeting with Voroshilov.

A few days later, General Deane discovered that the genial Voroshilov of the Moscow Conference had become a gruff, dissatisfied figure of few words. The Deputy Commissar of Defense expressed dismay about the few American divisions tying down a small German force in Italy, and observed that the real second front was still months in the future. Voroshilov curtly dismissed Deane after making those remarks, commenting that the three Moscow Conference agreements would be carried out and directing Deane to schedule any future appointments with the General Staff from now on, through Estigneev. Deane dealt with the Red Army General Staff from that point onward.⁶

The American swallowed his pride. Returning to the "stupid" Estigneev, Deane asked to see Marshal A. M. Vasilievsky, Chief of the Red Army General Staff. Estigneev told Deane that he could not arrange this; instead, he proposed to set up a meeting with the deputy chief of staff, General A.A. Antonov. Determined to meet only with the chief figure, Deane refused Estigneev's offer. It turned out to be a time-consuming error that wasted much of November. Vasilievsky spent

most of his time at the front lines, and Antonov was in fact the principal authority on most military affairs. So a sheepish Deane had to endure Estigneeov's "supercilious grin" when he finally asked to see Antonov. Estigneeov obliged.

General A.A. Antonov impressed Deane immediately at their first conference, and it took only a few minutes for Deane to see why this man was the de facto Chief of Staff. Intelligent and direct, "the coldest and most capable" man in the General Staff, Antonov berated Deane for the poor American showing in Italy (the Cassino stalemate was shaping up at the time). Like Voroshilov, Antonov noted that the U.S. Army tied up few German divisions in Italy. But Deane elected to go on the offensive himself, pointing out that the Western Allies had crushed Rommel's African units, caused Italy to surrender, ran Lend-Lease convoys through the dangerous sealanes to Murmansk, and conducted daily air raids over Europe. Furthermore, Deane pointed out that the United States fought Japan alone, without benefit of any Soviet "second front" in Siberia. The two glaring generals ended their meeting at that point, with nothing resolved.

What had Major General John Deane learned from his early experiences? First, he discovered that Harriman had been suffering similar abuses over the Italian Campaign from Molotov's office. The two men later determined that the Soviet cycles of accord and dissent were quite universal; as Deane said, "when it was Kick-Americans-in-the-pants week, even the charwomen would be sour." Secondly, they could only guess at the reasons for Soviet intransigence, allotting some credence to the theory that Stalin had two sets of advisors alternating in and out of favor. More likely, thought both Americans, the Soviet officers and diplomats were

displaying official disapproval with some American policy (in this case, the sputtering Italian campaign). The ambassador and his chief of Military Mission determined that aggressive American countercharges, presented with force but not rancor, offered the only defense to a negotiator. Deane and Harriman elected to ask President Roosevelt's personal intervention at the upcoming Teheran Conference in hopes of forcing some action out of the Soviets. So November slipped by without action.

Deane had learned some things, however. The first was that an American officer, even a general and chief of a Military Mission, had no special privileges in Moscow. Also, Deane found that a Soviet DVS officer monitored his meetings, and that Lieutenant General N.V. Slavin of the General Staff would be his constant shadow in all substantive military discussions. Deane blamed himself for overconfidence, ruefully admitting that, after a lot of chagrin, he had been forced to do it the Soviet way, with the only result a loss of valuable time.⁷

It is unlikely that either side seriously considered any real actions toward shuttle operations in November of 1943. Both the Americans and the Russians were preoccupied with the imminent Teheran Conference. The Soviet armed forces were completing a massive, hugely successful series of attacks in the southwest, surrounding Kiev in October and taking the city on 6 November. The German Wehrmacht, its Operation ZITADELLE halted and destroyed near Kursk in July and August, had been in painful retreat since mid-summer. The Soviets were winning their war without direct American help (though Lend Lease shipments certainly added to the margin of Soviet superiority).

As for the Americans, they had taken no real steps based upon the

Soviet approval in principle. The project had no code-name. The vital logistics study (always a sticking point, as VELVET showed) did not get completed until 9 December, 1943. No commander was designated, nor were forces allocated (even VELVET had gotten to that stage). The bad weather over Europe had closed down most air operations of a strategic nature for the year (especially in light of the 8th Air Force's carnage in October and subsequent withdrawal). General Deane's air aide, Brigadier General Hoyt S. Vandenberg, only stayed until the Teheran Conference, leading one to wonder about the seriousness of the American planners, who seemed willing to leave it all to General Deane. Vandenberg was not even replaced until June, 1944.⁸

The AAF (through Deane and Harriman) was asking for Soviet help, and the Soviets had assented "in principle," though Stalin stood to receive nothing in return. At this stage, there was not even a nod toward hitting targets for the USSR now and then. Perhaps the Soviet delay reflected the dissension in the Kremlin about giving the capitalist Americans such an unusual privilege. In any case, responding to Harriman's hopes, President Roosevelt determined to spur his Russian allies at Teheran.

Three Messages at Teheran

President Roosevelt arrived at Teheran on 28 November, 1943, domiciled in the Soviet compound based upon Stalin's fears of a German "commando hit squad" on the loose. Stalin had pretty much chosen the location, and his views dominated the the meetings and dinners, much to the distress of Prime Minister Winston Churchill of Great Britain. Stalin's entourage was limited to Molotov, Voroshilov, and V.N. Pavlov

(an interpreter). With the full agreement of the American military men, OVERLORD (the invasion of France) was set for May, 1944 (it would later slip to June). The Soviets agreed to launch a major assault on their front at the same time. And on the evening of 29 November, 1943, the American President handed the Soviet Premier three secret documents.

The first was titled "Proposals presented by the United States Delegation at the Moscow Conference," and asked Stalin for "concrete measures" toward executing Deane's three propositions. The second, "Advanced Planning for Air Operations in the Northwestern Pacific," reopened the old Bradley/BAZAAR idea for airfields in maritime Siberia. (For the record, it was now codenamed GLACIER.) The third related to naval intelligence and weather exchanges in the Pacific. Stalin accepted the three papers without comment.⁹

Two other incidents occurred at the first face-to-face meeting of the "Big Three." At one of the state meals, Marshal Voroshilov purposely sought out Major General John Deane, who was conversing with United States Army Chief of Staff General George Marshall. Marshall, as icy and grim as any Russian, coolly told Voroshilov that Deane spoke with the full authority of the American Joint Chiefs of Staff (Deane's former bosses). The Soviet Deputy Defense Commissar did not miss a beat, slapping his "old friend" Deane on the back and assuring Marshall that the two already had a rich relationship.

Another, more significant exchange occurred on 1 December, 1943 as the conference neared its final hours. President Roosevelt mentioned to Marshal Stalin that his son, Colonel Elliot Roosevelt, commanded a reconnaissance unit in Europe, and that Colonel Roosevelt was "very anxious" to fly over the Danube basin and land in the USSR.

Stalin immediately agreed, noting that details could be discussed with the U.S. Military Mission.¹⁰ This brief conversation, recorded by Chip Bohlen, offered the first commitment by Stalin himself toward allowing American air operations in the USSR.

The American embassy staff returned to Moscow on 17 December, enjoying the first of many harrowing Soviet transport flights across the frozen steppe and forests. The first few legs were in American craft. Then they used Russian planes (Lend-Lease C-47s). Deane discovered that every American cargo airplane flying in the USSR carried a Soviet radioman and navigator to assist in avoiding the anti-aircraft defenses of PVO (Protivovoydushaya Oborona) forces. The American pilots flew above clouds and weather; Soviet pilots flew below the cloud ceiling, hopping across fields and roads in snow and rain.¹¹ There was an implicit lesson here about differing views of air techniques, though Deane did not remark upon it.

Eight days after the Americans reached Moscow, V.M. Molotov called on W. Averell Harriman to provide the response to the three memoranda handed to Stalin on 29 November, 1943. Harriman observed that the Commissar for Foreign Affairs gave a written response to the "shuttle" operations query, but preferred not to give a written answer to the two Pacific inquiries. So, on 25 December, 1943, Molotov brightened Harriman's Christmas by providing definite approval for the AAF missions, stating that the "Soviet Air Force Command will be instructed for this purpose to begin preliminary conversations on the above question with the appropriate military representatives in Moscow with the subsequent consideration of the question by the Soviet High Command." Weather information was assured, as were the necessary air transport flights.

Molotov also gave oral approval to intelligence and meteorological transfers in the Pacific, though he went on to say that the GLACIER Siberian basing proposals, as usual, required "more time for study." Harriman and Deane had every reason to believe that their Soviet allies were seriously moving to assist the shuttle exercises.¹²

January Interlude

January passed without any direct US/USSR discussions about BASEBALL, the name that USAAF operations planners gave to the shuttle bombing concept. December had seen completion of preliminary logistics studies, which recommended use of the Persian Gulf route to move American stores. The United States could have stockpiled materials even without a specific destination in the USSR, and without fear of tipping off German intelligence or pressuring the slow-moving Stavka. The staff paper pointed out that the stockage already moving on the Lend-Lease route included "items of the same type as required for shuttle bombing operations." The Teheran path provided the best rail connections as well. Nevertheless, the American side did not start any sort of supply buildup in Iran.¹³ This inaction on the vital supply issue would delay BASEBALL when and if plans were finalized. Even if the Soviets completed all details on 1 January, the Americans would probably not have gotten air missions underway much sooner than they eventually did. Ocean convoys and overland rail shipments were not spur of the moment activities.

The AAF in Europe completed its reorganization efforts on 6 January, 1944. Lieutenant General Carl Spaatz assumed command of the

United States Strategic Air Forces (USSTAF), and directed Combined Bomber Offensive (CBO) missions of his subordinate Air Forces, the 8th (in England) and the 15th (in Italy). Lieutenant General Ira Eaker's Mediterranean Allied Air Forces (MAAF) coordinated all air actions in Italy and the Balkans, and interfaced with USSTAF in some 15th Air Force missions. Spaatz' objective was clear: destroy the Luftwaffe as soon as possible, but without fail before OVERLORD. All else (including BASEBALL) served that overriding goal.

The plan that coalesced out of all of this modified POINTBLANK, and was known as ARGUMENT. ARGUMENT allowed for a week of knock-out bombing, envisioning destruction of German airframe production in a series of huge penetrations. ARGUMENT combined RAF Bomber Command, 8th US Air Force, and the new 15th US Air Force in an all-out effort to crush the German Air Force. But foul weather and lack of escorts plagued the American bombers throughout January, with the 8th Air Force running radar bombing missions and the 15th Air Force limited to but four raids on German aviation factories. USSTAF developed renewed interest in shuttle operations, which arose as clouds and precipitation delayed ARGUMENT. Still, though this concern spurred Deane and Harriman, the lack of supplies on the ground in Iran insured BASEBALL could not occur on short notice, even had the USSR approved immediately.¹⁴ How could ARGUMENT forces have possibly landed in the USSR without their service support infrastructure to refuel them and rearm them? Indeed, runways long enough for B-17s did not yet exist in the USSR, nor did the steel matting necessary to create such strips. If ARGUMENT was launched before March or April, the BASEBALL project could do nothing to support the big raids.

In the Pacific, some initiatives were also underway. The extended

range Boeing B-29 "Superfortress" heavy bomber would arrive soon, and the B-29's distance capabilities opened some new strategic options. At San Francisco, California on 3 January, the United States Joint Chiefs of Staff decided to drive through the Marshall Islands of the Central Pacific, aiming at the Marianas Islands to provide B-29 bomber bases to strike Japan by the fall of 1944. Chinese laborers had begun constructing B-29 airdromes in mainland China, with missions planned for June, 1944.¹⁵ Of course, these plans were by no means assured things in January, but they offered viable alternatives if GLACIER (the Siberian concept) proved unworkable.

As for the Soviet armed forces, they had established full contact with Leningrad by 26 January, 1944, ending a gruelling German siege. In the Ukraine that January, Kirovograd was retaken and two German corps were encircled at Korsun.¹⁶ Clearly, the USSR's military ascendancy was growing more pronounced with every engagement. Perhaps the relief of Leningrad (which involved some major work by the Soviet VVS) had occupied the Soviets too fully to allow them to bother with BASEBALL; or possibly, the Red Army Staff and its subordinate VVS had yet to receive the motivating influence of direct attention from Stalin on the matter. After all, the USAAF wanted bases with VVS supplies and VVS ground service troops, and air defense as well, no doubt. The ground support requested for the shuttle idea surely violated the ironclad rule of Soviet warfare: concentrate all forces on the main effort. One can be certain that few Soviet soldiers or airmen, after tangling with the Wehrmacht for two and a half years, relished the idea of spending valuable military capital on some dubious allies and their strange long-range bombing schemes.

W. Averell Harriman's messages to Secretary of State Cordell Hull in January reflected the ambassador's frustration. Harriman said he was tired of getting the "complete runaround" on shuttle matters, and he wondered if this was a natural result of the "bottlenecking of all decisions in the Kremlin," so that Stalin's views had not fully "percolated" to his subordinates. (It should be pointed out that Stalin's views were usually translated to swift action, so the real indecision just might have been in the Georgian's mind.) Harriman resolved to take things up with Stalin himself if things did not improve.

A Red Army General Staff officer visited General Deane on 11

January, 1944, the first such call on Soviet initiative. Some routine matters were cleared up, but the Russian told Deane that his supervisors were "not yet ready" to discuss the shuttle plans. A few more weeks passed.

Deane and Harriman, under prodding from both General Arnold in Washington and General Spaatz in England, tried once more. On 30 January, 1944, W. Averell Harriman asked to see the Soviet generalissimo, specifying that the visit concerned shuttle missions. Stalin agreed to see Harriman on the evening of 2 February, 1944.¹⁷ This time, big things would happen.

Coordinating Conferences

At six in the evening on 2 February, 1944, W. Averell Harriman and Embassy Vice Consul Francis Stevens called on Josef Stalin. The Chairman of the Council of People's Commissars was accompanied by Molotov and Molotov's interpreter, V.M. Berezikov. Amenities were exchanged, then the men got down to business. Harriman spoke first.

"Daylight bombing can penetrate more deeply into Germany if American bombers from the United Kingdom and Italy are permitted to land regularly in the Soviet Union," said the U.S. ambassador. Harriman went on to mention that the use of Russian bases would reduce losses by avoiding the western Luftwaffe fighter and air defense belts. Stalin listened thoughtfully, then began questioning Harriman, showing an amazing degree of acuity (and indirectly paying tribute to ongoing NKVD intelligence collection).

How many airplanes at a time, asked Stalin? One to three flights of one hundred and twenty craft each time, said the American. Would

the Soviets supply fuel? No, said Harriman, the USAAF could provide bombs, fuel, and spare parts/repair services. Stalin asked about American ground crews; Harriman answered that the American air units preferred to provide specialists, though they welcomed Russian assistance. Stalin nodded approval, concluding with "We favor it," as the program would make the Germans "feel the Allied blows more."

The Soviet premier had other queries, showing that he had done some homework since Teheran. (Perhaps the knowledge collection process had delayed the Soviet response during January; there are no sources on Stalin's rationale here.) Stalin asked about United States aircraft fuel octanes, needed runway lengths, air-ground communications, provisions for the language barrier, and photo-reconnaissance techniques. Harriman answered capably, securing Stalin's approval for two recon flights a day and up to two hundred bombers per iteration (though Harriman forgot to ask about fighter escorts at the time).¹⁸

But Stalin was not finished yet. Recognizing that his American allies linked the European plans with future Pacific basing rights, Stalin shifted to a discussion of those options. "At a future date," Stalin assured Harriman that General Arnold could deploy bombers to Far East airdromes. The Russian leader could offer six fields immediately for up to three hundred planes, and genially promised "then we must build new bases" when reminded that Arnold wanted to send 1,000 American planes. Stalin assured Harriman that the chief of the Far Eastern UVS would be ordered to consult with General Deane to work out the details. The entire conference seemed a triumph for cooperation. As Deane said when informed of the meeting's content: "We were bursting with pride in our accomplishments and full of optimism

for the future."¹⁹

The elation of the United States' delegation proved well-founded. For his own reasons, Stalin had evidently elected to go with the shuttle proposal in a major way. The obfuscation of previous weeks evaporated, and on 5 February, Harriman and Deane sat down with V.M. Molotov and Lieutenant General N.V. Slavin, Deane's "shadow" from the General Staff. Besides the familiar Slavin, the Russian foreign minister was flanked by Marshal of Aviation A.A. Novikov, the VVS commander and his deputy, Colonel General A. V. Nikitin (the same officer who had signed the formal refusal letter in the VELVET case). The American general remembered Novikov as an inspirational man, a born leader, and an able administrator. Deane's day to day point of contact, the intense "workaholic" Nikitin (who averaged fifteen hours a day, seven days a week), proved more reserved, a counterweight to Novikov's charisma. Deane seemed particularly satisfied with the Soviet air officers, recalling them both as typical flyers in their willingness to experiment and sympathy with American AAF opposite numbers.²⁰ The Soviet VVS leaders showed a definite interest in the project, and Deane related well to them throughout their collaborative efforts.

As for the Soviet side of the talks, Nikitin received his marching orders at nine in the evening on 4 February. Stalin himself issued guidance to Nikitin and his superior Novikov, emphasizing Stalin's personal interest in the project. The orders required the VVS to prepare bases, plus supplies of fuel and bombs (not in Harriman's request, but in the USAAF staff studies - did the NKVD know of these already?). Nikitin was told to establish messing and shelter for visiting USAAF airmen. According to Nikitin, he and Novikov's

staff had been considering such matters since the Teheran Conference, and the officers possessed some outlines as to projected base organization/engineering and aircraft maintenance support. The two senior Red Air Force commanders went to their meeting on 5 February with a fairly well-developed planning background.²¹ This core of information allowed the Russians to display an impressive command of the issues at hand right from the start, and it proved a worthy successor performance to Stalin's 2 February mastery of detail. The Americans certainly felt the degree of Soviet interest; this shows a major difference from the stony, "cavalier" atmosphere of the November, 1942 VELVET meetings.

Molotov opened the meeting without emotion, directing Deane to review the American BASEBALL proposal. The U.S. general summarized the major points: the USAAF would send 360 bombers on each iteration, though they were willing to start off at a lower level, as low as one third of that numerical goal. Deane about five to six missions per month. These operations could be conducted from a complex of six airfields. The shuttling forces intended to hit targets to and from the USSR, and U.S. base operations crews could be limited to specialists with Russian VVS assistance. Reconnaissance flights were necessary, with bases and flight routes to assist these photographic trips. Deane went beyond Harriman's discussion with Stalin, notifying the Soviets that up to 150 fighter escort craft routinely accompanied such missions. Furthermore, the American asked for refuelling and rearming from compatible Lend-Lease stocks, and requested Soviet manpower to supplement the U.S. supply and arms men. Deane also observed that the USAAF needed the option to fly raids from the USSR to targets then back to USSR bases, though the American carefully

explained that there would be no permanent basing of USAAF combat flying units in the Soviet Union. Finally, Deane made the first offer to hit targets for the VVS on request.²² Molotov asked if Novikov understood the requirements, and reminded all that half the bases would be in the north, and half to the south. After a brief pause, Novikov stood up.

Producing a map, the Marshal of Aviation spoke in English: "These bases might be available." Novikov pointed to a cluster of facilities in the Ukraine, just east of Kiev. He recommended that region because late spring thaws in the north would greatly delay assembly of assets and commencement of required construction work. General Deane readily agreed that a group of three bases to the south might be preferable to a three/three north/south arrangement; in fact, Deane noted that his personal map study had focused on that same Kievian region.

(Conveniently for Novikov, this also moved the shuttle fields well south of the major Belorussian operation shaping up for summer, 1944.) At the southern fields, significant rebuilding had to occur. The Russian flyer explained that all airstrips in range for American bombing plans had been occupied and destroyed by the German invasion and subsequent Soviet counterstrokes. Some VVS units had moved in, but Soviet runways were too short (averaging 1096 yards or less, when B-17s needed at least 2000 yards to land), and the surfaces were too weak to support the big American four-engine craft. Novikov stated that Soviet VVS troops should do as much as possible with a cadre of American technical experts and some uniquely American supplies that the VVS could not provide. Novikov intended to emplace Russian air defenses for the entire complex, to which Deane and Harriman both readily agreed (this would later prove a sore spot, so Deane's memoirs

note that the Americans acquiesced "to get along"). Then Novikov assured the U.S. conferees that an American inspection team could choose the exact airdromes as soon as the USAAF could send such a group to the USSR.²³

W. Averell Harriman and his military chief agreed with the VVS Marshal's presentation, and all involved decided to meet again soon, though no specific date was set. General Nikitin (a very busy man with a small staff) was designated as the officer in charge of the VVS side of the shuttle program.²⁴ Both U.S. negotiators realized that the early February discussions reflected a significant alteration in Soviet procedures, and they fully expected some tough work ahead in nailing down the specific details of preparations. However, Harriman did not notify Washington of the Soviet approval until 7 February, 1944. In the United States, the USAAF commander, General Arnold, formed his three man inspection element. It was 6 March, 1944 before all of them reached Moscow to begin work.²⁵

In examining the initial substantive steps toward FRANTIC (renamed on 15 February after a suspected security leak)²⁶, three factors show themselves clearly. First, FRANTIC differed a great deal from VELVET in that it was not for Soviet use at all, but for the United States Strategic Air Forces. USAAF forces in FRANTIC would come and go, whereas VELVET's flight groups planned on staying. Unlike VELVET, the 1944 shuttle project allowed the resurgent USSR to help its American ally without any pretense of foreign intervention to "save" the Soviet Union. The second point involved the coherent Russian presentations at both conferences, demonstrating the thorough information collection efforts and planning skills of the Stavka and VVS. It is evident that the decision to permit FRANTIC was made on a

firm base of knowledge. Lastly, Josef Stalin used his excellent intelligence operations to gather accurate perceptions of the entire FRANTIC program. The Soviet leader's effusive interest in Far Eastern basing rights for the USAAF excited Harriman on 2 February, playing directly on FRANTIC's "hidden" objective and showing that Stalin knew of it. The Russians successfully evaded the Siberian subject throughout FRANTIC, but it seemed to merely string the Americans along. This certain fact existed: Stalin (for his own reasons) approved the "shuttle" project. His determination to avoid premature conflict with Japan insured "shuttles" never expanded into the Pacific littoral of the USSR. The Americans, and especially the Army Air Forces, were victims of their own opposing goals in FRANTIC. (Figure 3) Having finally extracted agreement from the USSR to run missions over Europe, the U.S. appeared determined to keep their "precedent" operational, regardless of military utility (the original goal, by February of 1944 a distant third in priority). FRANTIC would prove a precursor only in American minds. Like his successors in the 1970s, Stalin saw no virtue in "linkage." But those "hindsight" ramifications belonged to the future when Americans and Russians turned to concrete organizational procedures in early 1944.

Defining the Project

FRANTIC devolved upon the airmen now, though the diplomats and political authorities still entered the picture from time to time. The United States Army Air Force had full approval for Russian shuttle missions in February, 1944, though they moved without any pronounced speed in capitalizing upon the opportunity. As noted above, Marshal

Figure 3

FRANTIC Objectives

- #1. Establish precedent for American forces operating from Soviet territory with the aim of obtaining air bases later from which to bomb Japan.
- #2. Improve communications between the USA/USSR.
- #3. Closer cooperation between USA/USSR to improve general relations and troop morale.
- #4. Shuttle-bombing on a cross-continental basis; tactical advantages for the USAAF:
 - a. Reduce American aircraft losses.
 - b. Allow more raids in winter months by offering another flight origin site besides England or Italy.
 - c. Deliver heavier bombloads with less fuel usage.
- #5. Strategic bombing on the Russian front; strategic advantages for the USAAF:
 - a. Strike POINTBLANK targets that could not otherwise be bombed, especially oil facilities.
 - b. Force the German Luftwaffe to shift assets to the east before start of OVERLORD (Normandy invasion, 6 June, 1944).
- #6. Provide tactical support for USSR operations.

Order of Deane's priorities: 1, 2, 3, 4, 5, 6.

Order of USSTAF priorities: 5, 4, 6, 1, 2, 3.

Presumed order of USSR priorities: 6, 5, 3, 4, 2, 1.

SOURCE: "Summaries, Chapter 12, Conclusions," 1944, USAF Historical Research Center, Record 522.057-1, Maxwell AFB, Alabama.

Novikov's briefing required a AAF survey team to examine and select the precise airdromes, and that inspection trio was not completed until 6 March, over a month after the first military coordination meeting. As for the supply buildup, no decision had been made on shipments. Lieutenant General Carl Spaatz of the USSTAF in England elected to await firm establishment of the number and location of the FRANTIC bases.

Spaatz was more concerned with ARGUMENT. That massive air concentration on the Luftwaffe bore fruit from 20-26 February, 1944 in "Big Week." Over six hundred German fighters went down in front of the new P-51 "Mustang" fighter groups, with the lumbering bombers acting as live bait for the desperate Nazi interception units. The ten thousand tons of bombs dropped hit over 90% of German airframe production, with the tonnage alone equalling in one week all that Eaker had done in 1942 and 1943 combined. ARGUMENT broke the Luftwaffe by the grisly method of attrition, killing the experienced German pilots and tearing a temporary hole in rising Third Reich fighter production.²⁷ The German air arm was essentially finished after "Big Week," and Allied intelligence detected this German vulnerability. In purely military terms, "Big Week" showed the range capabilities of the new 15th Air Force in Italy. All likely targets were now in the umbrella. New, powerful P-51 fighters destroyed the Luftwaffe's capacity to intervene with the Normandy Invasion. The success of ARGUMENT knocked out most of the military rationale for FRANTIC; "shuttles" were not needed to restore American fortunes in the Combined Bomber Offensive.

Lieutenant General Carl Spaatz' USSTAF headquarters became the American action agency for FRANTIC, no doubt because the subordinate

8th and 15th Air Force bombardment groups would be flying the missions in question. While Arnold's USAAF staff had overall supervisory responsibility, Spaatz and Major General John R. Deane's Military Mission in Moscow were supposed to coordinate their planning activities, though just who was in charge at this middle echelon remained a bit snarled. The initial handling of General Arnold's three-man inspection team offered a good example of the consequences of this unclear authority channel.

Spaatz understood the wider perspective of FRANTIC, as evidenced in a cryptic memorandum that predated the 2 February breakthrough: "The main objective of BASEBALL itself is to prove to the other Ball Team how well we plan and play the game, so as to convince them to let us use their other Ball-fields...The other Ball Team is a unique ally with a state of mind and a system of policies few of us understand...Recommend therefore that 2nd echelon of BASEBALL have 1 to 3 officers...possessing or ability to acquire a sympathetic understanding with the other Team's state of mind and society."²⁸ Arnold's office took Spaatz' advice, and the three men sent to Moscow certainly expected unusual circumstances. Still, these typical Army Air Force officers, accustomed to quick solutions on tight schedules, were not quite prepared for the intricacies of FRANTIC and the Soviet military.

The American survey echelon comprised Colonel John S. Griffith, Colonel Paul Cullen, and Colonel Alfred A. Kessler, each personally chosen by General H.H. Arnold. The selection of Griffith reflected that officer's prewar experience in Russia. Colonel Griffith, designated as the USSTAF representative, was originally directed to "work with," not "under," Major General Deane, reflecting the split

lines of control between USSTAF and the Moscow Military Mission. Spaatz had insisted on this set-up, though it was overruled by Army Chief of Staff General George C. Marshall, who stuck to the old Army adage that the senior man on the spot should take charge. This showed Marshall's continuing faith in his old assistant John Deane. As he explained to Marshall, Deane had established himself as the American "voice" in Moscow on shuttle matters, and only further time dilation could result from another new face in Nikitin's office.²³ So Colonel Griffith took his orders from General Deane.

Colonel Paul Cullen had been chosen for his expertise in aerial reconnaissance; the President's son, Elliott, was not available, according to General Arnold. This was because Elliott Roosevelt had just assumed command of the English-based 8th Photographic Wing (Provisional) in February, 1944. As for Cullen, he commanded the 7th Photographic Group, part of Roosevelt's new command. Colonel Cullen had no previous service in the USSR. On the other hand, Colonel Alfred A. Kessler ("Uncle Ugly" to the Russian VVS officers) had already visited the USSR in 1943, and Arnold hoped this experience could be a help. Interestingly enough, Spaatz briefed all three colonels before they departed, and his presentation concentrated completely upon strategic and tactical purposes for FRANTIC. The "primary objective" hinged upon engagement of POINTBLANK targets. General Spaatz clearly stated that the trio were to "sell" AAF airpower to the Soviets through their own competence and that of the shuttle raiders to follow. It is not known why Spaatz did not explain the Pacific connection; his USSTAF "BASEBALL" memorandum certainly showed that Spaatz knew of the lowered priority of strictly operational concerns, a situation reinforced by the triumphant ARGUMENT air battles

occurring as Spaatz explained the program. Cullen and Griffith reached Moscow on 24 February, 1944. Kessler caught pneumonia en-route, and he did not arrive until 6 March, 1944. It had been over a month since Harriman had gotten the green light from Josef Stalin himself.³⁰

The group received an introductory orientation from W. Averell Harriman and Major General Deane that fully explained the Siberian rationale underlying FRANTIC. This new information confused the three colonels, as General Spaatz had neglected to mention the first two FRANTIC objectives (Siberian basing, U.S./USSR cooperation). The USSTAF commander's comments led the three airmen to believe that FRANTIC was just another tactical method (admittedly under full Russian scrutiny), like TIDAL WAVE or the North African shuttle of August, 1943.³¹ The diplomatic and political goals of the shuttle raids perplexed the USAAF officers, more accustomed to dealing with bombloads than treaty language. In any event, the disconnection between USSTAF and the Moscow Embassy contributed a measure to the confusion surrounding FRANTIC.

The Arnold team conducted initial negotiations in the many areas affiliated with carrying out shuttle raids. Being military men, they grew impatient with Soviet negotiating techniques, though Deane allowed them to let off steam in his office and assured them that all would work out.³² At the same time, Spaatz injected some assistance and guidance, and Arnold began his typically impatient barrage of telegrams, demanding action. Deane (and his boss, Harriman) dealt daily with Soviets on each of the items needed to create FRANTIC. The Russians and Americans worked together, sometimes smoothly and sometimes less so, in ten separate fields. In order of consideration by this work, they are: airbase selection, logistics,

introduction of USAAF personnel, base organization and construction, communications/air traffic control, meteorological support, intelligence and reconnaissance, public relations, American reciprocations for Soviet support, and target selection. Each of these portions of FRANTIC required preparation, negotiation, and compromise by the USAAF and Soviet VVS. Still, regardless of some hurt feelings on both sides, FRANTIC was ready for operations by 1 June, 1944.

Airbase Selection

The choice of likely airdomes became the first order of business for Griffith's survey team. Although Kessler had remained in Cairo, Egypt to recover from his illness, Griffith and Cullen linked up with Colonel General A.V. Nikitin on 28 February, 1944. Nikitin was ready with a list of possible air facilities, and like Stalin on 2 February, the diligent VVS deputy commander asked all of the right questions about recognition signals, required runway lengths and weight-bearing characteristics. Nikitin's business-like attitude assured the American visitors that the VVS had a solid grip of the situation. Colonel General Nikitin also set up an observation tour for the USAAF officers, and told them that they could select up to six sites for development, three in the north, and three more to the south. Colonel Griffith strongly urged adoption of a network of geographically concentrated facilities to allow simultaneous operations, with no chance of planes in one region being grounded due to climatic troubles. Based on a discussion of prevailing weather patterns (and a reminder from Nikitin that the ground in the Ukraine would be dry by 10 May), General Deane reflected that perhaps the inspection officers should consider only the three southern bases. Colonel General Nikitin suggested that the Americans examine the area around Kiev. After a few other minor issues came up for discussion, the meeting adjourned.³³

Once Kessler arrived on 6 March, the three colonels made their flight to the Ukraine and examined two bases, Kharkov and Poltava. Kiev, Konotop, and Kursk proved unavailable for inspection. Both

observed airdromes offered little for USAAF needs. All buildings had been razed by the Germans as they pulled out, and the tiny runways would require pierced steel planking overlays to bear the pressure of many heavy B-17s. With the survey underway, Deane cabled Spaatz and Arnold with final assurance of project approval, then faced a discouraged Kessler on 10 March. Kessler told Deane that the fields required extensive U.S. materials to refurbish them for use. The colonel even proposed brand new construction rather than conversion of existing facilities, though General Arnold refused that option on 14 March. The airmen would have to make do with what existed.³⁴

Later, some Americans considering the program would complain that the Soviets reneged on their original offer of six airdromes (3 north, 3 south). In fact, the Americans saw that it would strain their capacity to prepare the three in the Ukraine (it did). The original reduction was a U.S. choice; the Soviets did not press the unchosen northern sites.

On 16 March, 1944, the principals gathered again at VVS headquarters. Griffith's men reported their findings to Colonel General Nikitin. In the matter of airdrome selection, Nikitin noted that enemy destruction and VVS frontal operations precluded the use of fields west of the Dnepr River. Nikitin asked for the American officer's decision; could they use anything they had seen? Would they prefer new construction? Griffith said that Poltava might work, even as Nikitin darkly reminded the AAF colonels that Poltava's former tenants (the Luftwaffe) knew all details of the area. Still, Nikitin knew of two other likely positions in the Poltava oblast. The airstrips lay along the Kiev-Kharkov railroad, in the order Pinyatin, Mingorod, and Poltava, west to east. (Poltava, of course, had been the

site of a famous battle in July, 1709, though no AAF documents recalled that fact.) Each location was about fifty miles from its neighbor, considered adequate dispersion. All three strips were outside the towns that the USAAF (and the Soviet VVS) used to designate them. Nikitin described the primitive facilities. Each airbase had been the site of both Luftwaffe and VVS air units during the war, and the service structures were either damaged or non-existent. The longest runways stretched 1096 yards, much too short for B-17s, which required 2000 yard straightaways. The three USAAF colonels knew the airdromes needed extensive reconstruction, and they recommended use of pierced steel matting grids in preference to poured concrete surfacing in order to speed the work. On 16 March, 1944, Deane officially notified Washington, D.C. that Poltava, Mirgorod, and Pinyatin would be the FRANTIC bases. The three locations were confirmed by an American inspection on 31 March, 1944. 35

Logistics

The tyranny of supply directed modern military operations throughout the Second World War, and FRANTIC was certainly no exception. The earlier VELVET concept had envisioned a 30,000 ton buildup of stores to support a permanent force in the USSR; FRANTIC planning showed that the VELVET figures had been quite a bit underestimated.

The first concrete logistic thinking culminated in the December, 1943 staff study that recommended a buildup of fuel, munitions, construction materials, and vehicles along the Teheran Lend-Lease path. This same study, which was read but not acted upon, warned

against use of the Murmansk route (the typically active German opposition could cost up to half of the shipments) and observed that the Northern Pacific sealanes were restricted to USSR vessels and subject to Japanese inspection, rendering that option unworkable. Despite the Moscow and Teheran approvals in principle by the Soviet Union, no actual logistic preparations began until March, 1944.³⁶ This delayed FRANTIC's operational capability to a great extent.

Lieutenant General Carl Spaatz finally set the supply trains into motion before Griffith had confirmed the actual base selection. Knowing that the Soviets preferred the northern route to the Iran corridor, he placed five ships in Lend-Lease convoy JW-58. The freighters left for England in early March, even though those ships would use the dangerous Murmansk lane to reach the USSR. (Figure 4) The ships docked unscathed on 4 April, 1944, and the first trainload of equipment reached Poltava by 28 April. Soviet dockworkers did yeoman service to meet these tight schedules, and they were highly praised by the USAAF. Many USAAF officers appreciated the rigid Soviet insistence on unloading arriving rail cars in four hours, regardless of darkness or bad weather. The Russian laborers provided badly needed help when USAAF quartermaster teams discovered that freight was arriving faster than American quartermaster personnel. Although efforts at Murmansk and Poltava were outstanding, of over 25,000 tons of American equipment and supplies, only 65% had arrived at the Poltava air complex by 22 May, 1944. This was a natural result of the fact that Murmansk connected directly with the Soviet railroad system (the Teheran option, though slowed by trans-shipment at the USSR borders, allowed for American assistance at the trans-shipment

Figure 4

FRANTIC Logistics

Ships: SS George T. Angell; SS George M. Cohan; Edward P. Alexander;
SS John Davenport; SS William McKinley

<u>Type of Stores</u>	<u>Weight</u>	<u>Percentage</u>
Landing Mat	12,390	50 %
Gas/Oil	7,209	29 %
Bombs/Ammo	1,684	7 %
Vehicles	1,289	5 %
Spare Parts	895	4 %
Quartermaster Stores	595	2 %
Signals	465	2 %
Engineering	93	.4 %
Miscellany (Photo, Oxygen)	80	.3 %
<u>Medical</u>	<u>28</u>	<u>.01 %</u>
Total	24,728	100 %

SOURCE: "Brief History of Transportation," 13 September, 1944, USAF Historical Research Center, Record 522.01-1, Maxwell AFB, Alabama.

stations).³⁷ Some of the slowdown directly traced to Americans; the vital landing mat had been positioned at the bottom of the ships. Additional time lags stemmed from the fact that FRANTIC trains cut south across the massive spring buildup of materiel flowing west into Belorussia for the Russian Operation BAGRATION. All of this compounded the USAAF's late start. It should be noted that the other four FRANTIC convoys went by the recommended Persian Gulf passage, though one small supply element did dock at Murmansk in August, 1944.³⁸

Soviet VVS officers made up some of the American shortfall. Colonel General Nikitin recalled that, as early as 11 March, 1944, he received a pointed phone call from Josef V. Stalin. The Soviet supreme commander questioned his deputy VVS commander about the slowness of preparations at the FRANTIC bases (and the American survey's late arrival did not constitute an excuse). Nikitin made the mistake of assuming that Soviet industry could not produce the landing field matting, mentioning to Stalin that production of the pierced steel plates might use too much metal from USSR stocks, and inferring that the VVS would have to wait for American-made mats. Stalin immediately corrected Nikitin's misapprehension, ordering him to ask for his needs, and not to assume they cannot be met. Stalin's brusque interruption showed his personal concern with FRANTIC (the Soviet aircraft had no need of steel gridwork at their airstrips), and Nikitin recorded that domestically produced runway matting soon made its way to the Ukraine landing fields. American records do note on 5 May (after the northern shipments had off-loaded) that "other sources" (presumably Soviet) had been found for the needed pierced steel planking.³⁹ Since each runway used four to five thousand tons of

the stuff (it constituted about half of the cargo on the American merchant vessels), this Soviet assistance went a long way toward making up for slow railroad transfers.

Harriman told Stalin that American fuel and bombs would be used to refit the arriving flights of B-17s. Deane expanded this a bit, alluding to the fact that American Lend-Lease stocks might also be used. Stalin disregarded this, and from the start, told his men to ready themselves for full support, outside of actual repairs on the unfamiliar U.S. aircraft. (They eventually did those as well.) By 10 April, 1944, General Deane confirmed Stalin's foresight when he asked for 23,000 pounds of 250 kilogram (550 pounds) and two and a half million rounds of machine gun ammunition. Nikitin's planning shipped Soviet FAB 250 kilogram bombs to the base region, which American fliers used on at least one mission. Soviet fuel, food, and bedding also aided the missions in a major way. Given the American supply shortages caused by the late convoy and the overburdened north-south Soviet railroad network, this UVS assistance proved essential. FRANTIC could well have been postponed even longer if the Americans had to wait on their own supplies. It was another case of Stalin pointedly ordering provisions for these unique operations. Without this logistics assistance, said FRANTIC official historians, "the entire mission would have been impossible."⁴⁰

Introduction of American Personnel

Though shuttle missions did not employ constant stationing of Army Air Force combat groups in the USSR, the servicing of these transient American bombers and fighters demanded some USAAF ground

crewmembers. Deane asked for 2100 American mechanics and servicing men; Stalin agreed to 1200, with appropriate VVS supplementation. The Army Air Force soon discovered that one does not simply fly into the USSR, and haggling over visa methodology for the American ground units lasted over a month.

The NKVD and Molotov's Foreign Office insisted on careful control of the soldiers entering and leaving the USSR for FRANTIC. There was none of the desperation evident when Stalin assented to the RAF air cover in the far north back in 1941. This time, the Soviets concocted a plan for group visas which permitted security reviews on each man entering the country. The concept seemed simple enough, though it annoyed the Americans to no end. Each group of USAAF personnel entering Russia would come through Teheran. There, the U.S. Persian Gulf Command would compile a list for each echelon of troops moving north by train or plane. The USSR consulate would stamp "approved" on each manifest, and every man would get a special identification card. When the USAAF ground crewmembers reached the Poltava complex, they would be "checked off" on copies of the approved troop lists by a special Border Control unit. Every group visa allowed one entry and one exit. In this way, the Russians kept a running total of Americans in country as well as guarding against supposed security risks.⁴¹

The Soviet plan was not unique. In December of 1943, American authorities at Fairbanks, Alaska had used similar techniques to get control of the number of Russian fliers stationed there to pick up U.S. Lend-Lease planes. After a few ugly incidents involving Soviet wives and daughters interacting with all-male Army Air Force troops at Fairbanks, the State Department had clamped down stringent group visa regulations that restricted Soviet pilots to one entry and one exit

per visa, and denied any further entrance of Russian dependents.⁴²

Still, the size of the FRANTIC contingent and the intransigent nature of the USSR's government resulted in a complete breakdown of the intended system. The first American group stopped at Teheran for weeks when it was found that the Soviet ambassador had no instructions on the visa rules. Then, once regulations made it to Iran, the incoming Americans had to wait while their crewlists went to Moscow for review. By the time the documents got back (invariably approved), there had been alterations in the manifest due to transfers, illness, or promotions, and the whole process went around again. If an individual American officer had to leave the Poltava area for coordination in Teheran, Italy, or England, he had to reenter on the next group visa. For a period, these men would be counted twice against the 1200 man total. Personnel reporting in the USAAF units developed into a high bureaucratic art. In the words of Ministry Counselor Max Hamilton, the nagging visa troubles "had reduced our life expectancy by at least five years."⁴³

Were the Americans getting the needed personnel, the trouble might have been worthwhile. Unfortunately, the hasty nature of FRANTIC execution (despite reams of plans dating into 1943) resulted in a unit of bits and pieces. Ground crews were drawn from many air groups and, in the words of a report on morale troubles from April to October, 1944, "thrown together in a strange country." The American formations had no standard organization until 29 July, 1944, with resultant confusion in assignment of skilled personnel. Not all personnel were properly skilled, either. The piecemeal drafts on forces in England and Italy combed in individuals with "no training or little aptitude"

(for example, only 75% of the aircraft mechanics were duty-qualified, and these men were expected to instruct three Russian ground crewmen apiece). Even more annoying, planners mistakenly filled early movement echelons with clerks and staff men, leaving the supply and repair teams short-handed as they struggled to establish their shop operations. The USAAF units had asked for language experts; instead, they got a few Russian-Americans and a large consignment of pocket phrase books to muddle through the mission. It was August, 1944 before grammars arrived, and language training remained "sporadic and inexpert."⁴⁴ In essence, the picture of the arriving U.S. troops became less that of a picked band and more the image of a mongrel lash-up.

Eventually, the bulk of Americans had moved in, and the Soviets grew less enthusiastic about their designed visa philosophy, though they could resort to it now and then to pressure the Americans. After all, especially once the bombers started flying in, even the NKVD could not detain the many "unauthorized" fliers who came in as substitutes for the "approved" crews. Such last-minute switches typified the fighting group procedures. But the rules were usually enforced on the two weekly supply flights to Teheran. Once combat operations commenced, the visa program served to slow the transfer of planeless American flight crews back to their English and Italian bases.

Base Organization/Construction

The designation of the airdromes at Poltava, Mingorod, and Pinyatin (the Poltava aerouzel , "air center", "air complex") spurred

both Allies to arrange units and command chains to run the air stations. The Soviet VVS formed its FRANTIC components before the Americans created their units, and the Russian service support contingent numbered about 1400 men and women.

Nikitin (under Novikov's instructions) organized the 169th Aviatsionuyu Bazu Osobogo Naznacheniya (ABON) ("Air Base Special Task Force"). Command of the 169th ABON was entrusted to Major General of Aviation A.R. Perminov, a hand-picked, competent VVS officer. Perminov's staff included men chosen by Nikitin for tact, initiative, and fine records of accomplishment. The Americans involved in FRANTIC had nothing but praise for these officers.

The development of the 169th ABON included some unusual steps. The VVS created a new unit of aircraft technicians, forming the brigade from the top graduates of one class of airframe mechanics, engine specialists, electricians, and armament servicers. This innovative step broke with the usual VVS process of integrating replacement mechanics into existing service units. Nikitin thought this cohesive unit of top new technicians proved a great success, and American accounts agree.⁴⁵

Besides repairmen and administrators, 169th ABON also controlled the base defense forces. The Poltava air center disposed both fighter interceptors and fixed antiaircraft guns, which were elements of the PVO (the VVS air defense arm). Fighters came from the four regiments of the 310th IAD (Istrebitelnaya Aviatsionnaya Diviziya - Fighter Aviation Division), a PVO formation under Colonel A. T. Kostenko. Three of the regiments flew day fighters (Lend-Lease P-39s at Pinyatin and Mirgorod, and a mixed force of Yak 7b/9D interceptors at Poltava). One regiment, the 802d NIP (Nochnaya Istrebitelnaya Polk -

Night Fighter Regiment) provided adverse weather and night-time cover for all three bases. The 802d flew twin-engine Pe-3 fighter models, some of which carried low-capability radar gear.⁴⁶ The night unit probably flew from the central Mirgorod base.

The fixed antiaircraft gunnery came from an unknown Antiaircraft Division from the 6th Corps of Antiaircraft Artillery. Like the fighter division, the AA gun division included four regiments, three with 37mm cannons and 12.7mm machineguns and one with 85mm cannons and more 12.7mm machineguns. One 37mm regiment took up positions at each of the three airfields, though the location of the single heavy (85mm) unit remains in dispute (some Americans thought it was at Poltava, in total or in part). There is strong evidence that the bigger guns were not at Poltava, and may not have accompanied the rest of their division to the Poltava region. The Russian guns employed the PUA20-3 visual antiaircraft fire control director, with each regiment controlling its own four batteries. Searchlights supplemented the optical tracking at night, and the observers of the 4th VNOS (Vozdushnogo Nablyudeniya Onoveshcheniya Svyazi - the flight early warning observation signallers) Regiment gave sighting reports throughout the Kiev area during the spring and summer of 1944. Though the USSR had developed the RUS-1 (1938) and RUS-2 (1940) radars and integrated them into the "Pegmatit" radar station array, no radars were in large-scale production, and none apparently participated in the 169th ABON's defensive structure in the Poltava air center. Female soldiers composed the bulk of the air defense gunnery crews for FRANTIC.⁴⁷

The Russian force began setting up shop in March of 1944, preceeding the Americans by a few weeks. During this time, the United

States element changed command when Major General John R. Deane asked Lieutenant General Carl Spaatz of USSTAF to relieve his man, Colonel John S. Griffith. Colonel Griffith "lacked the temperament and personality suited to the difficult task of working closely with the Russians," said Deane. It seemed John Griffith had last experienced Russia as a member of the British anti-Bolshevik expeditionary force after World War I, and Griffith "made no secret" of his anti-Soviet feelings. Deane feared that Griffith's manner was jeopardizing the smooth working relationship needed to move from FRANTIC to future Siberian plans. General Spaatz was quite upset by Griffith's dismissal, writing Arnold to question Deane's decision (an example of the consequences of a dual chain of command). Suggestions circulated at USSTAF headquarters in Bushy Park, England that John Deane was not an "air officer," and was jeopardizing the program.⁴⁸ But Arnold backed Deane's move. So Griffith exited on 5 April, and Colonel Alfred A. Kessler assumed the leadership of the American USSTAF contingent.

Titled Provisional Eastern Command, USSTAF (though previously known as the innocuous "Detachment 5,") Colonel Kessler and his staff arrived at Poltava on 14 and 15 April, 1944. Poltava was the American headquarters from the outset, and Kessler established American units at each base. He established unit #559 at Poltava, and unit #561 at Mirgorod, both of which were intended as bomber bases. Kessler wanted both fields to handle a combat wing (up to eighty "Flying Fortresses"). The escorting fighters were to use Base # 560 at Pinyatin, though this strip would also be capable of receiving four-engine bombers. As American officers and men reached the bases, Colonel Kessler filled each base with the requisite specialists. (Figure 5)

Figure 5

The Poltava Air Complex

Soviet Forces (under Soviet VVS) : Major General A.R. Perminov

169th ABON: Maintenance and Base Operations

Three Service Battalions

Three Truck Battalions

310th IAD: Fighter Interceptor Division

Antiaircraft Division, 6th Corps PVO: Air defense guns/searchlights

2 Labor Construction Battalions: Base Construction, unload trains

American Forces (USAAF)

Operational Control: USSTAF; Administrative Control: Military Mission

Eastern Command, USSTAF (under USSTAF/Embassy) : Colonel A. A. Kessler*

Base #559: Poltava (includes headquarters for Eastern Command)

Base #560: Piryatin

Base #561: Mirgorod

USAAF Personnel

1st Echelon - 3 (Supervisory) Air

2nd Echelon - 10 (Staff) Air

3rd Echelon - 252 (Admin, Maintenance, Medical, Signal, Supply) Air

4th Echelon - 751 (Admin, Maintenance, Medical, Signal, Supply) Train

5th Echelon - 199 (Admin, Maintenance, Medical, Signal, Supply) Air

Murmansk Convoy - 6 (Supply) Sea

Total: 1221 officers and men

*Effective 5 June, 1944, Major General Robert L. Walsh assumed command of Eastern Command, USSTAF, though Colonel Kessler continued to run the Poltava air complex day to day.

SOURCES: "History of the Eastern Command, Chapter VI, Organization," 1944, USAF Historical Research Center, Record 522.01-2, Maxwell AFB, Alabama, pg. 109; "Personnel for FRANTIC by Section and Echelon," 1944, USAF Historical Research Center, Record 522.115, Maxwell AFB, Alabama.

Kessler's men were all airbase service personnel; they did not participate in base defense, nor did they do the heavy construction work needed to refurbish the airfields. Two Soviet construction battalions, made up of women like the antiaircraft gun batteries, carried out the difficult duty of laying the heavy pieces of steel landing mesh. USAAF aviation engineers stated that the Soviet construction battalions emplaced the pierced plates at four times the doctrinal work rate. These "brawny, exuberant" Russian women amazed American inspectors like General Deane and Major General Fred Anderson (deputy to General Spaatz at USSTAF) with their rhythmic work patterns, and Deane opined that the long strips seemed to grow as one watched.⁴⁹

Some members of the Russian mechanic brigade enjoyed the privilege of using the new American equipment as it rolled off the trains from Murmansk. In the VVS, driving was a specialty duty (like radioman or bomb fuzer), so the Russian troops were surprised as American sergeants appointed any handy G.I. to drive the big green trucks off the rail cars. General Deane reported that one Soviet private, chosen to drive a wreckage disposal truck (a tow truck for battered planes), was the "envy of his comrades." The Russian kept the truck in immaculate condition, and his evident pride was not an isolated case.⁵⁰ The Russians at Poltava, Mingorod, and Piryatin were excited and happy to be involved, no doubt because it beat front-line service against the merciless Germans.

Two inspection visits give a gauge of the progress at the three airfields. On 28 April, 1944, Major General Deane reported that little had been done, though Perminov and Kessler showed the Moscow Mission chief that plans were "well in hand."⁵¹ On 15 May, 1944 Major

General Fred Anderson (and Colonel Elliott Roosevelt, whom his superiors had finally made available to solve some serious snags in the reconnaissance arrangements) landed at Poltava ("with the approval of the local soviet in Poltava," as Nikitin recalled). The Americans were already in good humor, since the VVS had approved modifications to unpalatable restrictions on American photo flights and had finally given official approval to the routine landing of American fighter escorts with the FRANTIC bombers. (Remember, Harriman had forgotten to ask Stalin about this issue, and though it had been assumed by both sides, it remained a sticking point until Anderson's trip.) The happy Americans considered the progress "amazing," as most AAF personnel had gotten to the bases, supply trains were coming in, and bustling Russian women were laying runway plates with the speed and precision mentioned earlier. Kessler and Perminov briefed Anderson that the runway network was sixty-five percent complete, and Anderson stayed a few days to take a detailed look at things. He expressed his full satisfaction and confidence to the American-Soviet staff at the air center, and relayed his views to Spaatz and, eventually, Arnold as well.⁵² By 1 June, 1944, the 169th ABON and the Eastern Command USSTAF were ready to begin combat missions.

Communications/Air Traffic Control

American air units depended heavily upon radio signals, both to conduct their flights and to direct their formations to and from bases. Communications comprised three areas: signals out of the USSR, signal traffic within the USSR, and radionavigation. Cooperation in this area was rated indispensable by the USAAF officers, though it would violate several Soviet laws and traditions that disallowed legal operation of foreign radio stations on Soviet soil.

Signal communications between the USA and the USSR were an integral part of Deane's original three proposals at the Moscow Ministerial Conference in October, 1943, and Roosevelt's three messages at Teheran also alluded to the American desires for secure, reliable radio traffic. Until 1944, Soviet-American radio links were made between the Russian Commissariat for Communications and American commercial carriers (RCA, for one). However, the Great Circle relay route used suffered frequent disruptions as it ran near the magnetic north pole. On 31 January, Molotov ameliorated the situation somewhat when he increased the Moscow transmitter by sixty kilowatts and promised four channels solely for U.S. use. He also notified the Americans that better antennas would be installed. Though a help, this did not solve the magnetic interference.

In the first few days of February, General Deane met with Lieutenant General Slavin of the Red Army General Staff about the situation. Deane asked for a U.S.-directed hookup from Moscow to Teheran; Slavin countered with a request for a Soviet-operated radio station relay from the USSR embassy in Washington, though he would

settle for a New York City site. However, the 1934 Communications Act, passed by the U.S. Congress and approved by President Roosevelt, strictly prohibited the functioning of a foreign radio station on American soil. The Joint Chiefs of Staff reminded Deane of that on 12 February, 1944. So it was illegal in both nations.

But the Joint Chiefs saw a way around the legal problems. They offered a twenty-four-hour radio network through Africa, and proposed a teletype (not a radio and not under the 1934 law) connection. Deane brought the news to Slavin, who said his dignity was hurt. After all, Marshal Stalin had waived Soviet law for his ally. Could not Roosevelt do the same? After trying to explain that altering Congressional legislation would take longer than the war would last, Deane gave up, and Slavin left. Deane guessed that Slavin's superiors wanted the teletype, but they maintained a hard line because of their disappointment over the radio circuits. Molotov's predictable refusal of further reciprocal radio discussions went to Ambassador Harriman on 11 March, 1944; six days later, the same Soviet official notified Harriman that the teletype proposal had been approved. The encoded traffic was run by the Soviets with American observers outside Moscow, and by the Americans with Russian assistance inside the new Pentagon building in Washington, D.C. It would be June before the final agreement was completed, but once this logjam broke, the others followed, based on the principle of dual US/USSR operation. Two intriguing sidelights completed this part of the communications planning. First, the Soviets installed the American-made radio teletype and cryptological devices without U.S. aid, and ran their end of the network quite competently, which surprised American signal officers.⁵³ Second, this teletype system remained in full use

until 16 May, 1946, a precursor for the Kennedy-Khrushchev "hotline" (also a teletype, in deference to both countries' communications laws).

Once Molotov approved the jointly manned teletype line, the question of communications inside the USSR (and to AAF sites in Europe) was quickly solved. Novikov and Nikitin used their professional influence to expedite the decision. Given the language barrier and the obvious procedural differences (the VVS had no long-range bomber force in an American sense), Colonel General Nikitin told Major General Deane that as long as Soviet operators present at each site monitored American transmitters, the USAAF could conduct its communications as it wished. This marked departure from Soviet procedures (and violation of Soviet law; these were not teletypes) was one of the high points of the FRANTIC collaboration.⁵⁴

Communications also included radio direction finding stations, as the massive B-17 combat boxes and their accompanying single-engine guardians "rode the beam" into their airbases. This radionavigation had proved a two-edged sword to the Soviet Union's air arm. German planes often rode the beam to Russian airdromes, so the Soviets had quit using the devices, preferring to fly low and use terrain features like roads or rivers for flying azimuths.⁵⁵

The radionavigation in the USAAF belonged to the Army Airways Communications Service (AACS), and consisted of homing beacons and radio towers. The 11th Region AACS operated with the Soviets on the Alaska-Siberia Lend-Lease route, so there had already been some contact before FRANTIC. FRANTIC radiodirection fell under the 24th Region AACS, and its commander Lieutenant Colonel William Day moved with great enthusiasm to accomplish his given mission. In March,

Lieutenant Colonel Day travelled to Caserta, Italy (Mediterranean Allied Air Forces, an agent for FRANTIC under USSTAF), Casablanca, Morocco (African AACS headquarters) and Algiers, Algeria (Air Force Headquarters for his region). At each spot, Day gathered information and arranged linkups to extend his beam system into the USSR. He also got connected with the Signals Airways Service (SAS), which would share his facilities in the USSR. By 25 March, 1944 Lieutenant Colonel Day had assembled his advanced party at Teheran to await visa approval to enter the USSR.

Day himself planned to lead the initial component, which included eight cryptologists, eight radio operators, and three officer supervisors. He brought along an officer and ten signalmen from the SAS as well, but the AACS force got no further than Iran. While cable traffic went back and forth from Teheran to Moscow (the Soviets demanded that Day's men go to Moscow first; the Americans held out to go directly to Poltava) and the teletype agreement was hammered out, Day did not idle away the waiting time. The officer assembled 20 air transports and 70,000 pounds of necessary radio equipment besides his lead craft, with a single AACS man aboard each plane. By 19 April, 1944, approval came in for Day and his men to move north into Russia, though they were routed through Moscow after all. On 22 April, 1944 Russian pilots flew Day's lead C-87 and the other aircraft at the traditional hair-raising treetop altitude, and the American radio technicians and their gear reached Moscow intact. The AACS soldiers enjoyed the ballet and the usual fine food and drink, and their aircraft were not inspected. On 24 April, Day's men flew down to Poltava at 750 feet, and were greeted by Major Rodinoff of Perminov's staff. By the next day, the Americans were at work.⁵⁶

Unlike other construction tasks at the Poltava locations, AACB and SAS men handled the installation of the homing beacons and radio sets. Soviet soldiers watched and helped where they could. On 27 April, 1944, Day's troops and their UVS helpers got a serious scare at Poltava. While running cables for the electronic packages, the Russian assistant discovered wires leading to a cache of twelve German bombs inside the main (and only surviving) building. The twelve thousand plus pounds of explosives tied into a buried control box two hundred and fifty yards away. The control allowed for radio detonation of the bomb, using an eighty by twenty yard ground antenna camouflaged in nearby weeds. Aside from indicating that both American and Soviet initial inspections had been cursory, this incident also showed that the Luftwaffe had probably not detected the construction at Poltava, or they would have flown by to blow their stay-behind mine. Despite the interruption, Day's men completed their work, sending the first message to Caserta, Italy on 28 April, 1944. By 7 May, 1944 the communications and navigation systems were ready for operations.⁵⁷

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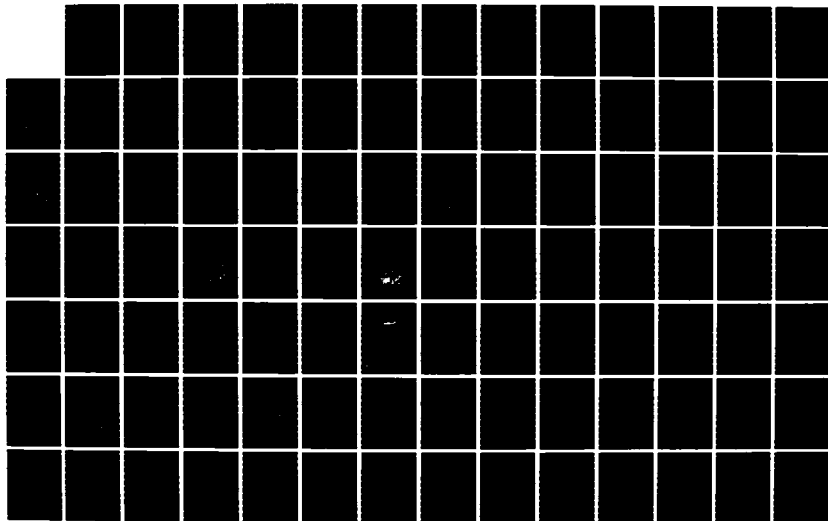
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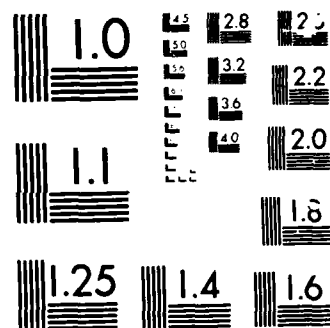
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Meteorological Support

Weather information greatly affected air operations in 1944, as the advent of "all-weather" radar capability was still far off. POINTBLANK had suffered from the vagueries of European clouds and rain, and accurate meteorological forecasting was important to the choice and attack of bombing targets. Unlike other areas, weather cooperation predated FRANTIC, and it was not much trouble to the USAAF to establish the necessary provisions for weather intelligence transfers.

Before the war, the Soviets encrypted their weather data. In 1941, early Lend-Lease discussions incorporated an exchange of Siberian weather readings for those of U.S. west coast stations. Major General Follett Bradley did not see any Siberian airstrips, but he did expand the weather information flow in that region. Captain Konstantin F. Speransky of the Soviet Navy visited the United States in 1943, staying from February until July. The Speransky mission enlarged the meteorological data base to thirty Siberian stations, though Speransky overreached himself by planning to link New York City and Moscow as well, a step the Soviet refused to consider in 1943.

After one American reminder that the Russians had agreed to support FRANTIC with meteorology assistance, Harriman heard from Molotov on 21 March, 1944. The Soviets assented to reciprocal weather exchanges. Deane sent his naval assistant, Rear Admiral Clarence E. Olsen to meet with Captain Speransky and his superior, Lieutenant General Eugene K. Federov (a famous Soviet polar explorer and scientist). General Deane knew that Speransky did not like the AAF

officers he had met in the United States, so he wisely sent USSTAF weather expert Colonel Lewis L. Mundell down to Poltava to act as chief of staff for Colonel Kessler. Admiral Olsen established outstanding rapport with Speransky and the genial Federov, who described himself as a scientist and openly avowed his great respect for America. By 27 March, 1944, the agreement was completed. Over one hundred weather stations reported their data in each country, and the combined mass of knowledge was available to both sides. Federov released full charts and statistics for European Russian weather patterns. Until the teletype linkage became functional in June, 1944, these huge transactions went by radio. After June, they used the teletype system.

The meteorological agreement remained in effect throughout the war and was still in use in 1947, when Deane wrote his memoirs. Some U.S. Navy weather teams even entered Siberia (yet another attempt to open that area to American forces) in August 1945, but due to Soviet delays, the Navy groups arrived twelve days after Japan surrendered. For some unknown reason, these foreign sailors stayed in the USSR until 15 December, 1945.⁵⁸ Despite this odd conclusion, the FRANTIC missions benefited from the weather arrangements of March, 1944.

Intelligence and Reconnaissance

The United States and the Soviet Union had already given each other some military information before FRANTIC, but three particular areas were germane to FRANTIC: OSS/NKVD cooperation, provision of intelligence by the VVS, and the use of American F-5

photoreconnaissance aircraft. The Soviet military had not provided any intelligence data to the American embassy until 13 April, 1943, so their cooperation during FRANTIC represented another major alteration in Soviet practice.⁵³

The Office of Strategic Services (OSS) under Major General William Donovan had a general effect upon strategic bombing operations. OSS reports and intercepts gathered target information for the JOCKEY committee at USSTAF as the air analysts pored over possible bombing objectives. Additionally, the OSS confirmed or denied the effectiveness of American POINTBLANK raids. Thus, General Donovan's interest in cooperating with the NKVD opened another potential conduit of indicators about POINTBLANK (and FRANTIC) efficiency. Donovan came to Moscow on 23 December, 1943, and met with the NKVD (the Russian Secret Service and Secret Police). The Soviets expressed optimism over possible cooperation, and both sides agreed to exchange missions in each other's capital cities. Despite the Russian desires for swift action, this time it was the United States that applied the diplomatic brakes. President Roosevelt stalled the mission transfer on 16 March, 1944. Harriman and Deane wired their strong endorsement of the program, which they saw as a prop for the shuttle plan. But Roosevelt, facing reelection in November, refused to allow NKVD men into America. He cabled his final rebuff on 30 March, 1944. The Soviet NKVD, for their part, continued the collaboration anyway, using the ubiquitous General Deane as their go-between. Information interchanges and operational cooperation between the NKVD and the OSS persisted throughout the war. General Deane thought this cooperation truly helpful to the war effort; Eastern Command's official history denigrated it as "barren," culminating in a botched September, 1944

combined mission on Tri Duby, Czechoslovakia.⁶⁰ There are no direct indications of OSS/NKVD information in Eastern Command intelligence documents, though such matters may still be classified.

Intelligence from the VVS was easier to obtain than the more esoteric data of the NKVD, though not as urgently required. Lieutenant General D. Grendal controlled VVS intelligence and reconnaissance forces, and he was parsimonious with his facts. Kessler and Colonel Cullen first discussed intelligence with General Grendal on 17 March, 1944. Grendal limited his comments to an admission that the Luftwaffe had radar stations and antiaircraft guns on the front, but the Russian gave no specific data. This situation changed on 6 April, when the Soviet reconnaissance leaders presented the Americans with complete target information, enemy situation, and maps of the Soviet positions and air defenses. After the Anderson mission in mid-May, Americans began receiving the daily intelligence bulletins from the Red Army General Staff and VVS intelligence section.⁶¹ It should be explained that the Soviets probably did not collect the sort of strategic target information on Eastern Europe that Kessler wanted, but Grendal's data on more immediate tactical matters did a little to expedite FRANTIC plans.

General Grendal also had a voice in the photoreconnaissance discussions. The Americans employed F-5 "Lightning" twin-engine fighters, stripped of armament and flying alone to photograph targets. The USSTAF liked to use three "looks" at each bombing site, beginning with pre-mission assessments vital for last-minute strike briefings and weather evaluations. The recon pilots flew a strike assessment immediately after the bombers wheeled off and then, usually the next day, obtained a view of the target area after the smoke and fires

subsided. The 8th Air Force controlled the 8th Photo Reconnaissance Wing (Provisional), which in August, 1944 was formally designated the 325th Photo Reconnaissance Wing (Colonel Roosevelt's unit). 15th Air Force drew its recon support from the MAAF's Mediterranean Allied Photo Reconnaissance Wing (the 90th USAAF Wing, to be exact, though some RAF planes also worked on FRANTIC).⁶² Recon pilots flew "on call," waiting for breaks in the weather or specific intelligence needs before lifting off. But Grendal, acting on Novikov and Nikitin's guidance, insisted on a twenty-four hour notice to launch recon flights. Harriman and Deane at first assented, but Colonel Cullen (who had commanded a photo unit) explained that this was unworkable. General Grendal remained adamant.⁶³

Grendal's attitude was not simply an act of stubbornness. Soviet PVO anti-aircraft gunners, lacking sophisticated radar, had standing orders to engage any aircraft flying east across the front, though the air defense batteries were familiar with some Soviet aircraft types and did receive notification of impending Russian air operations. Perhaps this was another reason Soviet pilots flew so low; it surprised PVO air defenders and at the same time gave them a better chance to see the friendly silhouettes and red star insignias. This "shoot on sight" order is not unusual; modern American air defense units provide similar instructions to their gunners under degraded electronic conditions (and PVO electronics in 1944 were by definition degraded). It would be possible to get the word out to the PVO with twenty-four hours notice; less than that, and Grendal could not guarantee American safety.

Colonel Elliott Roosevelt's visit with the May Anderson mission catalyzed the reconnaissance procedures, and Grendal gave permission for photo operations. Colonel Paul Cullen, an expert recon flier and the operations chief for Kessler's staff, decided to test Grendal's promise on 24 May, 1944. He and another pilot flew over some possible FRANTIC targets, then returned to the Poltava airstrip. Both U.S. F-5 radios failed, and it took until 26 May for General Spaatz to find out that the runs had been fully successful and the pilots were safe. Another flight on 27 May drew fire from the Mirgorod batteries as it headed back for Poltava. The F-5 evaded the shots, and it was attributed to an accident. On 30 May, 1944, four F-5s flew in from Italy without observing the twenty four hour notice rule, and Perminov's women gunners opened fire as the strange, unfamiliar twin-tailed craft came in to land. The fire proved ineffective, and Kessler was informed that Perminov could allow no further scheduled recon missions, since the four planes had entered the USSR without permission. There were repeated concerns by Grendal that Germans would trail the Americans using captured U.S. planes (and the Luftwaffe did have them). During the FRANTIC JOE mission, the Americans proposed five air corridors to allow them to fly at sepecified altitudes at any time. Marshal Novikov assented, but Stalin overruled. The Soviet surpreme commander did permit recon flights on a ten hour notice in the corridors, however.⁶⁵

The issue of air defense should have gotten a better hearing as a result of the F-5 missions in May, but it did not. Soviet gunners continued to engage single American planes flying across the front lines, even with the ten hour notice. As a result, recon pilots and planes that dropped out of FRANTIC formations faced ground fire and even air interception on a recurring basis. The USSTAF Eastern Command

and Major General Deane's Military Mission spent a great deal of time protesting these incidents. For some reason, the utter ineffectiveness of the errant Russian air defense batteries against American planes did not worry the Army Air Force leaders in the USSR. The issue would come up for heated review following successful Luftwaffe air raids.

Public Relations

With the "morale effects" of Soviet - American cooperation ranking above the tactical and strategic considerations, there should be no surprise that the reporting of the events also required negotiation. Deane confided the details of FRANTIC to the American and British correspondents in Moscow, and promised them that they could all come to witness the inaugural mission. Colonel General Nikitin created a minor flap when he secured Foreign Office approval for a mere five journalists. The thirty Western reporters prevailed upon Deane to try to reverse this decision, so on 1 June, 1944, Deane pressured the Foreign Office to raise the quota to ten Americans and ten British press figures. The reporters went one better, staging a piquant "sit-down" strike inside their Russian-piloted transport on a Moscow runway. The correspondents demanded that all thirty go to Poltava; amazingly, the Soviets relented.⁶⁶

Aside from direct press coverage, the Americans tried to portray their bomber and fighter forces in the most professional light. Special B-17 bombing demonstrations outside Moscow in March, 1944 proved the efficacy of employing American bombers and Soviet 250 Kilogram bombs. W. Averell Harriman dedicated an exhibition of American USAAF combat photography in Moscow in June of 1944, which

Soviet sources at the time praised as "impressive." General Eaker invited Soviet officers to fly back to Italy at the end of FRANTIC JOE to experience the bomber raid first-hand - two VVS men did so.⁶⁷ Throughout the FRANTIC missions, the necessity for American professionalism was stressed as a precondition for future Siberian ventures (though as already noticed, personnel practices retarded progress in this area). The idea was to convince the Soviets that FRANTIC was worth expanding. Considering the Soviets got almost nothing out of FRANTIC, this was rather optimistic. Still, it insured that, like the Soviet VVS, Spaatz's USSTAF had cause to keep his best men on station.

American Reciprocations

The United States gave the USSR few direct compensations for the FRANTIC missions. Certainly, the massive Lend-Lease program alone justified some Soviet response, though the Soviet case that it merely "paid" the USSR's ground forces to fight the bulk of the German Heer had some merit until 6 June, 1944. There were only three direct Soviet requests that came out of FRANTIC, and the United States approved only two.

The first request, Colonel General Nikitin's interest in obtaining a Norden bombsight, was approved on 2 March, 1944. On 15 March, 1944, a C-1 Automatic Flight Control Equipment system was also authorized. Both items fulfilled the three rules the United States adhered to in providing its secret equipment to Allies: the Americans had already used the device, the surprise effects had been exploited, and the Germans probably already had examples of the gear. The components did not get to Moscow until April, 1944, once Deane

ascertained that FRANTIC would soon transpire. Not much came of the Norden delivery; a later Soviet request for instruction on the unit resulted in a single 72 hour classroom lecture in Moscow in October, 1944.⁶⁸ The Norden issue got caught up in GLACIER (the Siberian project) and an attendant Soviet appeal for four engine bombers under Lend-Lease.

The Soviet government asked for 300 B-24 "Liberators" and 240 B-17 "Flying Fortresses" in April of 1944, a proposal that General H.H. Arnold and his staff quickly denied. Arnold's men decided that the USAAF needed all available B-17s and B-24s for its own purposes. The American airmen assumed the Russians would "waste" the bombers, lacking experience in long-range strategic aviation. Finally, if these bombers were delivered, the VVS could employ them against Japan and would not need U.S. air assistance. Deane recommended that the USSR bomber application be used as a bargaining tool to force the Russians to accept GLACIER. Stalin would repeat the request in June, 1944, linking it directly to GLACIER possibilities. The Americans would treat it differently then, with FRANTIC underway. But despite a lot of cable traffic, the Soviets never got the bombers. It is safe to say that the active USSR internment of straying U.S. aircraft in the Far East gave the VVS examples of most U.S. bombers by 1944, including the B-17, B-24, and B-29 as well. Bulk Lend-Lease shipments never came to pass.⁶⁹

Finally, the Soviet VVS asked to station an element in Bari, Italy to support Marshal Tito in Yugoslavia. Twenty four planes eventually made up the token force, and four U.S.-made craft were given to Marshal Tito (a violation of Lend-Lease). As with the B-17 flights in the USSR, the Soviets were carefully directed, and an

unapproved parachute drop of agents in Greece in July, 1944 brought protests and tight controls on the little VVS unit.²⁰ The Soviets were merely one more portion in the multi-national Italian campaign, which already included Brazilians, Indians, Poles, Italians, South Africans, New Zealanders, and Free French, to name a few. This exercise evidently showed the USSR flag, though it gave no other evident advantages, and Soviet leverage over Yugoslavia gained little from the mission.

Major General Hugh Knerr, a USSTAF maintenance expert, was one of many who made the statement that the Soviets were out to "rob us (the USAAF) blind of everything they could get their hands on."²¹ This attitude, especially after some understandable coloring by the Cold War period, can be found in many American accounts. Was this a substantial complaint? The answer appears to be "no." The only useful information the Soviets gained involved air to ground traffic control techniques and a single bombsight (notwithstanding those taken from interned bombers). Other lessons, such as how to have women lay runway matting or how to form a special mechanics' brigade, hardly appear important discoveries. Stalin, Novikov, and Nikitin evidenced considerable background knowledge about American equipment and techniques from the earliest discussions, so the belief that the USAAF gave away their "technical secrets" is a rather weak argument against FRANTIC. All of the equipment the Soviets observed (and most of the methodology) was rendered obsolete within five years by the jets and atomic bombs of the postwar era. Considering that visiting Americans saw a low-altitude, fair-weather air force without radar operating day to day (and unable to defend its airfields against 1939 vintage German bombers), one wonders just which side displayed its vulnerabilities

more fully. The failure of the Soviets to date to develop a credible long range bomber force (their big planes operate on naval surveillance more often than nuclear strike) offers convincing evidence that whatever the UVS learned, they did not translate that knowledge into hardware and capability.

Target Selection

The opening FRANTIC mission went to Major General Nathan Twining's 15th Air Force in Italy on 3 May, 1944. The English-based 8th Air Force was heavily tied up in OVERLORD missions over Normandy, and Spaatz turned to his newer, smaller Italian unit to carry the ball. Spaatz' message directed Twining to recommend targets out of his usual priority list. The POINTBLANK directive had been modified again, this time into Spaatz' invention, the "Oil Plan." (Figure 6) Spaatz hoped to crush Germany by cutting off her oil supplies by concentrated attack. FRANTIC bombing proceeded under that particular version of the Combined Bomber Offensive, with Eastern Command's intelligence staff listing its priority targets under the Oil Plan's dictates. (Map 3) Throughout early 1944, the impatient General Arnold had sent several telegrams urging Spaatz to get the project underway.²² In May, with the bases nearing completion and the forces chosen, all that remained was to select some good attack sites.

From 24-31 May, 1944, the key American figures in FRANTIC held a meeting in Wimbledon, England to pin down the target question and wrap up loose ends before the first mission. W. Averell Harriman represented the Moscow embassy. Lieutenant General Spaatz spoke for his USSTAF command, and Lieutenant General Ina C. Eaker of MAAC was on

Figure 6

Eastern Command Implementation of the USSTAF Oil Plan

Target Priorities:

- 1) Crude Oil Refineries: 15th Air Force, Italy
Synthetic Oil Plants: 8th Air Force, England
- 2) German Air Force Production/Installation
- 3) Synthetic rubber and tires
- 4) Rail centers

FRANTIC "Priority One" Targets:

- 1) Crude Oil Refineries : Czechowice, Poland; Drohobycz, Poland; Glinik Marian Polski, Poland; Jaslo, Poland; Jedlicze, Poland; Lwow, Poland; Trzebinia, Poland; Bohumin, Czechoslovakia; Dubova, Czechoslovakia; Moravska Ostrava, Czechoslovakia.
Synthetic Oil Refineries : Oswiecim, Poland.
- 2) Airdomes : Bialystock, Poland; Biala Podlaska, Poland; Koblany, Poland; Kobryn, Poland; Lublin/Swidnik, Poland; Mielec, Poland; Warsaw/Okecie, Poland; Buzau, Rumania; Radow, Rumania.
Aircraft Factories : Mielec, Poland; Warsaw, Poland.

SOURCES: Colonel Paul T. Cullen, "Eastern Command Targets," 11 July, 1944, USAF Historical Research Center, Maxwell AFB, Alabama; Wesley F. Craven and Jerome L. Cate, The Army Air Forces in World War II, vol. 3 Europe: Argument to V-E Day, January 1944 to May 1945 (Chicago: University of Chicago Press, 1951), pg. 280; Russell F. Weigley, Eisenhower's Lieutenants (Bloomington: Indiana University Press, 1981), pp. 58, 60, 379.

SOURCE: Lester A. Sobel, Editor,
Maps on File (New York:
Facts on File, Inc., 1982)
 pg. 0.004

EASTERN EUROPE, May 1944
 FRANTIC Airbases

— Front Line

○ FRANTIC Priority
 One Targets

MAP 3



hand to talk for the 15th Air Force. A new face, Major General Robert L. Walsh, stood for Eastern Command, USSTAF. Walsh was enroute to assume nominal command at Poltava and take over as Deane's Air Deputy (the first since December, 1943, and a bit after the fact, in a sense). Walsh would allow the able "Uncle Ugly" Kessler continue as on-site leader at the Poltava complex.⁷³ Several decisions were reached at the six day affair.

First, the initial FRANTIC mission was to be flown before the D-Day landings of 6 June, 1944. It was hoped that the Luftwaffe would take notice and shift assets to the east, uncovering the Normandy area. Also, general consensus formed around the idea that any target designated by the Soviets should be struck on a priority basis. Finally, a list of three targets, evenly spaced from north to south, were chosen. Riga, Latvia to the north and Mielec, Poland in the center contained Heinkel aircraft factories worth bombing. Galati, Rumania in the south had a major Luftwaffe airfield. The Wimbledon conclave cabled these findings to Moscow. General Deane conveyed this message to Moscow on 27 May, 1944 as a courtesy.

On 29 May, 1944, Deane's old "shadow," Lieutenant General N. V. Slavin responded in an unexpected fashion, disapproving all three targets. A two hour argument ensued. Slavin desired that the first FRANTIC raid strike the familiar oil refineries and airdromes around Ploesti, Rumania (a very popular and vital target for 15th Air Force leaders). However, Slavin also accepted Brasov, Bucharest, and Cluj, Rumania. Budapest or Debrecen, Hungary were approved. But Deane could not get Slavin to commit himself. Spaatz did not know what to do, but Deane knew the situation in Moscow and told Spaatz to select any targets he desired in Hungary or western Rumania. The Military Mission

chief suspected that the Red Army General Staff had simply secured their upcoming June offensive (BAGRATION) by refusing to approve any location, for fear that the Americans (and German intercepts) could deduce BAGRATION's direction by seeing which targets were or were not struck. Deane knew that OVERLORD was set for early June. To have any strategic effect, FRANTIC had to go immediately. The fields were ready. General Eaker of MAAF had already alerted his bombers and fighters, and told Spaatz to authorize the mission, hitting Ploesti or where ever, but to "go." Spaatz agreed, setting the objective as the rail marshalling tracks at Debrecen, Hungary. On Deane's recommendation, the Soviets were told, not asked, about future strike locations.⁷⁴ Spaatz sent the target choice to MAAF headquarters in Caserta, Italy, along with a personal request to Lieutenant General Ira C. Eaker. Would Eaker lead the first FRANTIC raid? Eaker agreed willingly, and when the weather cleared on 2 June, 1944, FRANTIC JOE began.

CHAPTER 2

Notes

1. W.Averell Harriman and Elie Abel, Special Envoy to Churchill and Stalin (New York: Random House, 1975), pp. 48-49, 228-229; John R. Deane, The Strange Alliance (New York: The Viking Press, 1947), pp. 10-12, 27, 69-70; "Communication, Acting Secretary of State Adolf A. Berle to Maxwell M. Hamilton," 1 October, 1943, in Foreign Relations of the United States, 1943, 6 vols. (Washington, D.C.: U.S. Govt. Printing Office, 1963), vol. III: The British Commonwealth, Eastern Europe, the Far East, pg. 704.
2. Colonel Alfred R. Maxwell, "Shuttle Bombings to Russia from UK and Italy," 22 November, 1943, USAF Historical Research Center, Record 522.161-5, Maxwell AFB, Alabama; Deane, The Strange Alliance, pp. 20, 107.
3. "History of Eastern Command, Chapter I, Strategy and Mission," USAF Historical Research Center, Record 522.01-2, Maxwell AFB, Alabama; Major General Barney M. Giles, "Employment of Heavy Bombers from Airports in Russia," 10 November, 1943, USAF Historical Research Center, Record 522.161-5, Maxwell AFB, Alabama; Deane, The Strange Alliance, pg. 107.
4. Harriman and Abel, Special Envoy to Churchill and Stalin, pp. 238-239; Deane, The Strange Alliance, pp. 16-20; "Presentation of Major General John R. Deane," 20 October, 1943, in Foreign Relations of the United States, 1943, 6 vols. (Washington, D.C.: U.S. Govt. Printing Office, 1963), vol. I: General, pp. 778-780.
5. Deane, The Strange Alliance, pp. 23-25.
6. Deane, The Strange Alliance, pp. 29-32; "FRANTIC History: Negotiation and Planning," 1944, USAF Historical Research Center, Record 522.04-1, Maxwell AFB, Alabama, pg. 1; "Most Secret Protocol, 19-30 October, 1943 Moscow Conference," in General (1943), pg. 773.
7. Deane, The Strange Alliance, pp. 32-34; "History of Eastern Command, Chapter I, Strategy and Mission," pg. 35.
8. John Erickson, The Road to Berlin (Boulder, Colo.: Westview Press, 1983), pp. 112, 142; Esposito, 1900-1953, map 39 World War II; Deane, The Strange Alliance, pg. 27.
9. Erickson, The Road to Berlin, pp. 150, 154-161; Deane, The Strange Alliance, pp. 42-45; "Secret Communication of President Roosevelt to Marshal Stalin Regarding Air Operations Against Germany," 29 November, 1943 and "Secret Communication of President Roosevelt to Marshal Stalin Regarding Advance Planning for Air Operations in the Northwestern Pacific," 29 November, 1943 in Foreign Relations of the United States, Diplomatic Papers, the Conferences at Cairo and Teheran, 1943 (Washington, D.C.: U.S. Govt. Printing Office, 1961), pp. 617-619.
10. "Notes on Meeting of 1 December, 1943 by Charles E. Bohlen," 1 December, 1943 in Foreign Relations of the United States, Diplomatic Papers, The Conferences at Cairo and Teheran, 1943, pg. 596; Deane, The Strange Alliance, pg. 45.
11. Deane, The Strange Alliance, pp. 46-47.
12. "Secret, Unnumbered Personal Communication to the President from William Averell Harriman," 27 December, 1943 in Foreign Relations of the United States, Diplomatic Papers, The Conferences at Cairo and Teheran, 1943, pp. 859-861.

13. Colonel Garland H. Williams, Acting Chief of Strategic Logistics Branch, "Logistic Implications of Shuttle Bombing of Eastern Germany from the USSR," 9 December, 1943; Lukas, Eagles East, pg. 196.

14. Wesley F. Craven, and Jerome L. Cate, The Army Air Forces in World War II, 7 vols. (Chicago: University of Chicago Press, 1949), vol. 3: Europe: Argument to V-E Day, January, 1944 to May, 1945 (1951), pg. 30; Dr. Noble Frankland, The Strategic Air Offensive Against Germany, 4 vols. (London: Her Majesty's Stationary Office, 1961), vol. II: Endeavor, pg. 84; "History of Eastern Command, Chapter I, Strategy and Mission," pg. 38, 44; Major General Fred L. Anderson, "Message to AGWAR, Washington, D.C.," 24 January, 1944, USAF Historical Research Center, Record 522.161, Maxwell AFB, Alabama; "FRANTIC Daily Progress Reports, January-August, 1944," 1944, USAF Historical Research Center, Record 522.115, Maxwell AFB, Alabama.

15. Costello, The Pacific War 1941-1945, pg. 485; Barbara Tuchman, Stillwell and the American Experience in China (New York: The Macmillan Co., 1970), pp. 529-530.

16. Erickson, The Road to Berlin, pp. 164-165, 174; Esposito, 1900-1953, maps 39-40 World War II.

17. "FRANTIC Daily Progress Reports, January-August, 1944"; Harriman and Abel, Special Envoy to Churchill and Stalin, pg. 296; "Communication, Ambassador William Averell Harriman to the Secretary of State, #69," 9 January, 1944 and "Communication, Ambassador William Averell Harriman to the Secretary of State, #86," 11 January, 1944 in Foreign Relations of the United States, 1944, 7 vols. (Washington, D.C.: U.S. Govt. Printing Office, 1966), Vol. IV: Europe, pp. 802-803, 807-808.

18. Harriman and Abel, Special Envoy to Churchill and Stalin, pp. 296-297; "Conversation Record, 2 February, 1944, Subject: Russian Bases for American Shuttle Bombers and Photo Reconnaissance Planes," 2 February, 1944, USAF Historical Research Center, Record 622.430-6, Maxwell AFB, Alabama.

19. Harriman and Abel, Special Envoy to Churchill and Stalin, pg. 296; "Memorandum of Kremlin Meeting, 2 February, 1944 by William Averell Harriman," 2 February, 1944 in Europe (1944), pp. 942-944; Deane, The Strange Alliance, pg. 108.

20. Deane, The Strange Alliance, pp. 108-109; "Conference Notes, 5 February, 1944; Soviet Bases for American Shuttle Bombers," 5 February, 1944, USAF Historical Research Center, Record 522.01-1, Maxwell AFB, Alabama.

21. A.V. Nikitin, "Chelnochnye operatsiy," Voenno-Istoricheskiy Zhurnal, 11, (1975), pg. 42.

22. Ibid.; "Conference Notes, 5 February, 1944; Soviet Bases for American Shuttle Bombers"; Deane, The Strange Alliance, pp. 109-110.

23. Ibid.

24. Nikitin, "Chelnochnye operatsiy," pg. 42; Deane, The Strange Alliance, pg. 111.

25. "Chronological Record of FRANTIC Project," 1944, USAF Historical Research Center, Record 522.115, Maxwell AFB, Alabama.

26. "Shuttle Bombing," 15 February, 1944 and Lieutenant General Carl Spaatz, "Message to Eaker for Twining," 17 February, 1944, USAF Historical Research Center, Record 522.161, Maxwell AFB, Alabama.

27. Craven and Cate, Europe: Argument to V-E Day, pp. 44-47.

28. Lukas, Eagles East, pg. 196; "History of Eastern Command, Chapter VI, Organization," 1944, USAF Historical Research Center.

Record 522.01-2, Maxwell AFB, Alabama, pg. 80.

29. "FRANTIC History: Negotiation and Planning," pg. 3; General George C. Marshall, "Message to Spaatz and Deane," 20 February, 1944, and "Personal Letter to W. Averell Harriman, hand-carried by Col. Griffith," 1944, USAF Historical Research Center, Record 522.161, Maxwell AFB, Alabama.

30. "History of Eastern Command, Chapter VIII, Politics," 1944, USAF Historical Research Center, Record 522.01-2, Maxwell AFB, Alabama; "FRANTIC Daily Progress Reports, January-August, 1944"; "Conference Notes, USSTAF Headquarters," 8 February, 1944, USAF Historical Research Center, Record 522.161, Maxwell AFB, Alabama; Colonel Roy M. Stanley II, World War II Photo Intelligence (New York: Charles Scribner's Sons, 1981), pg. 64.

31. "Conference Notes, USSTAF Headquarters"; Dr. Bruce C. Hopper, "Interview with Brigadier General Alfred A. Kessler," 5 July, 1944 and Colonel Alfred A. Kessler, "Progress of FRANTIC Project," 6 April, 1944, USAF Historical Research Center, Record 522.01-1, Maxwell AFB, Alabama.

32. Deane, The Strange Alliance, pg. 110; Colonel Alfred A. Kessler, "Diary, 5 February, 1944 through 7 May, 1944," USAF Historical Research Center, Record 522.0591-3, Maxwell AFB, Alabama.

33. "Minutes of Meeting, 28 February, 1944," 28 February, 1944, USAF Historical Research Center, Record 522.01-1, Maxwell AFB, Alabama.

34. Kessler, "Diary, 5 February 1944 through 7 May, 1944"; "FRANTIC History: Negotiation and Planning," pg. 4; "Inspection of Russian Airdromes at Kharkov and Poltava," 10 March, 1944 and "An Inspection of Bases at Poltava, Mirgorod, and Pinyatin," 2 April, 1944, USAF Historical Research Center, Record 522.01-1, Maxwell AFB, Alabama.

35. "Meeting at Aviation General Staff Headquarters," 16 March, 1944 and Major General John R. Deane, "Message to AGWAR," 16 March, 1944, USAF Historical Research Center, Record 522.01-1, Maxwell AFB, Alabama; Great Soviet Encyclopedia, 1970 ed., trans. by Jean Paradise, et al. s.v. "Mirgorod," "Pinyatin," "Poltava."

36. Colonel C.H. Voeller, Chief of Transportation, "Memorandum for Colonel Youngs," 16 February, 1944, USAF Historical Research Center, Record 522.161, Maxwell AFB, Alabama; Williams, "Logistic Implications of Shuttle Bombing of Eastern Germany from the USSR"; "FRANTIC History: Negotiation and Planning," pg. 4.

37. "FRANTIC History: Negotiation and Planning," pg. 4; "FRANTIC Daily Progress Reports, January-August, 1944"; "History of the Eastern Command, Chapter VII, Logistics," 1944, USAF Historical Research Center, Record 522.01-2, Maxwell AFB, Alabama; Major General John R. Deane, "Message to Spaatz," 3 May, 1944 and "Supplies Expensed in Percentage Extracted for Kessler's Cables," 1944, USAF Historical Research Center, Record 522.161, Maxwell AFB, Alabama; "Brief History of Transportation," 13 September, 1944, "History of Supply Division, Eastern Command," 1944, "Movement of Russian Cargo through the Persian Gulf," 8 May, 1944 and "Quartermaster History through August, 1944," USAF Historical Research Center, Record 522.01-1, Maxwell AFB, Alabama.

38. "History of Eastern Command, Chapter VII, Logistics," pg. 8; "Meeting at UUS Air Force Headquarters," 5 April, 1944, USAF Historical Research Center, Record 522.01-1, Maxwell AFB, Alabama.

39. Nikitin, "Chelnochnyye operatsiy," pg. 42; Kessler, "Diary,

5 February, 1944 through 7 May, 1944"; "Cable to Colonel Youngs," 5 May, 1944, USAF Historical Research Center, Record 522.161, Maxwell AFB, Alabama.

40. Major General John R. Deane, "Letter to Major General Nikolai Stepanov," 10 April, 1944, USAF Historical Research Center, Record 522.01-1, Maxwell AFB, Alabama; "Summaries, Chapter 12, Conclusions," 1944, USAF Historical Research Center, Record 522.057-1, Maxwell AFB, Alabama, paragraph 34; General H.H. Arnold, "Message to Spaatz," 18 July, 1944, USAF Historical Research Center, Record 522.161, Maxwell AFB, Alabama; Major General John R. Deane, "Message to Spaatz," 1 June, 1944, USAF Historical Research Center, Record 622.430-6, Maxwell AFB, Alabama; M.I. Semiryaga and I.I. Shinkarev, Istroiya Utochny Mirovoy Voyny, 12 vols. (Moscow: Voennoe Izdatel'stvo Ministerstva oborony SSSR, 1978), vol. 9: Osvobozhdenie territorii SSSR i Evropeiskikh stran Voyna na Tikhom okeane i v Azii, pg. 512.

41. Deane, The Strange Alliance, pp. 112-113; "Diplomatic and Consular Contacts for Current and Subsequent Echelons," 24 February, 1944, "Reports to Russian Agencies on Movement of USAAF Personnel," 10 May, 1944, "Brief of Conference," 25 April, 1944, and "Brief of Conference," 5 May, 1944, USAF Historical Research Center, Record 522.01-1, Maxwell AFB, Alabama.

42. "Memorandum of John D. Hickerson," 17 July, 1944 and "Communication, Secretary of State to Ambassador William Averell Harriman," 6 December, 1943 in The British Commonwealth, Eastern Europe, the Far East, pp. 678-680, 723-725; "History of the Eastern Command, Chapter V, Personnel," USAF Historical Research Center, Record 522.01-2, Maxwell AFB, Alabama, pg. 151.

43. Deane, The Strange Alliance, pg. 113; "Personnel Section History," 1944, "Personnel," 28 May, 1944, "Personnel," 5 June, 1944, and "Personnel," 2 July, 1944, USAF Historical Research Center, Record 522.01-1, Maxwell AFB, Alabama.

44. "History of the Eastern Command, Chapter V, Personnel," pg. 54-55; "Personnel for FRANTIC," 18 March, 1944, Major Albert Lepansky, "Memorandum for Colonel Youngs," "Activation of Units," 29 July, 1944, and "History of Eastern Command Maintenance Section," 1 August, 1944, USAF Historical Research Center, Record 522.01-1, Maxwell AFB, Alabama; "Eastern Command Narrative of Operations, 6 June, 1944," 1944, USAF Historical Research Center, Record 622.430-6, Maxwell AFB, Alabama; "Report on Status of Monie in the Eastern Command," 5 October, 1944, USAF Historical Research Center, Record 522.0591-1, Maxwell AFB, Alabama.

45. Nikitin, "Chelnochnye operatsiy," pg. 42; "History of Eastern Command, Chapter VI, Organization," pp. 108-110; Kessler, "Progress of FRANTIC Project"; "FRANTIC History: Negotiation and Planning," Tab, Maintenance Engineering, pg. 2; See also Appendix Two for detail comparisons of aircraft flight characteristics.

46. Nikitin, "Chelnochnye operatsiy," pg. 43, 45; "Report of Proceedings of Board of Officers," 2 August, 1944, USAF Historical Research Center, Record 522.01-1, Maxwell AFB, Alabama; "MAAF History of FRANTIC, 26 October, 1943 to 15 June, 1944," 12 July, 1944, USAF Historical Research Center, Record 622.430-6, Maxwell AFB, Alabama; Robert Jackson, The Red Falcons (Brighton: Clifton Books, 1970), pg. 142.

47. "Report of Proceedings of Board of Officers"; Deane, The Strange Alliance, pp. 118, 121-122; Colonel Archie J. Old, "Report on Shuttle Mission to Russia," 6 July, 1944, USAF Historical Research

Center, Record 522.01-1, Maxwell AFB, Alabama; Colonel Edward D. Gray, "German Bombing of Poltava Airdrome on 21st June, 1944," USAF Historical Research Center, Record 522.161-5, Maxwell AFB, Alabama; "Antiaircraft Defenses, Eastern Command Bases," 19 July, 1944, USAF Historical Research Center, Record 522.115, Maxwell AFB, Alabama; N.A. Svetlitshin, Voyska PVO strany v Velikoy Otchnestvennoy Vovne (Moscow: Izdatelstvo "Nauka," 1979), pp. 15, 160-162, 175; W.L. White, Report on the Russians (New York: Harcourt, Brace, & Co., 1945), pp. 122, 179, 183; Sovetskaya Voennaya Entsiklopediya, 1977 ed., s.v. "Zenitny Artilleriyskiy Polk" by E. Ya. Shereshevskiy.

48. Nikitin, "Chelnochnye operatsiy," pg. 42; "History of Eastern Command, Chapter VIII, Politics," pg. 84-87; Major General John R. Deane, "Letter to Arnold," 4 April, 1944 and Lieutenant General Carl Spaatz, "Letter to General Arnold," 21 April, 1944, USAF Historical Research Center, Record 522.161-5, Maxwell AFB, Alabama.

49. "MAAF History of FRANTIC," pg. 7; Deane, The Strange Alliance, pg. 116; Kessler, "Diary: 5 February, 1944 to 7 May, 1944"; "Operations Summary," 16 June, 1944 and "Outline of Operations, Corps of Engineers Section, March to October, 1944," 1944, USAF Historical Research Center, Record 522.01-1, Maxwell AFB, Alabama; "Announcement of Staff Officers, General Order No.7," 6 June, 1944, "Assumption of Command, General Order No. 6" 5 June, 1944 and "General Order Number One," 10 April, 1944, USAF Historical Research Center, Record 522.430-6, Maxwell AFB, Alabama; "Chronological Record of FRANTIC Project," 1944, USAF Historical Research Center, Record 522.115, Maxwell AFB, Alabama.

50. Kessler, "Diary: 5 February, 1944 to 7 May, 1944"; Deane, The Strange Alliance, pg. 116.

51. Ibid.

52. Deane, The Strange Alliance, pp. 115-116; Nikitin, "Chelnochnye operatsiy," pg. 43; Major General Fred L. Anderson, "Report on Visit to Russia by a Mission of USSTAF Officers," 21 May, 1944, USAF Historical Research Center, Record 522.161, Maxwell AFB, Alabama.

53. Deane, The Strange Alliance, pp. 65-69; "Communication, Ambassador William Averell Harriman to President Roosevelt," 12 March, 1944 and "Communication, Ambassador William Averell Harriman to President Roosevelt," 27 March, 1944 in Europe (1944), pp. 949-950, 956.

54. Deane, The Strange Alliance, pp. 113-114.

55. Harold Faber, Luftwaffe: A History (New York: New York Times Books, 1977), pg. 233.

56. Deane, The Strange Alliance, pg. 114; Louis Shores, Highways in the Sky, the Story of the AACS (New York: Barnes and Noble, Inc., 1947), pp. 102, 174-176, 254-257.

57. Shores, Highways in the Sky, pg. 176; "Communications History," 1944, and "Report of Enemy Land Mining Operation," 2 August, 1944, USAF Historical Research Center, Record 522.01-1, Maxwell AFB, Alabama.

58. Deane, The Strange Alliance, pp. 73-78; Kessler, "Progress of FRANTIC Project"; "Meeting at Red Army Air Force Headquarters," 30 March, 1944, USAF Historical Research Center, Record 522.01-1, Maxwell AFB, Alabama.

59. "Communication, Ambassador William H. Standley to Secretary of State, No. 297," 13 April, 1943 in The British Commonwealth, Eastern Europe, the Far East, pg. 646.

60. Deane, The Strange Alliance, pp. 51-54; "History of the Eastern Command, Chapter IV, Intelligence," USAF Historical Research Center, Record 522.01-2, Maxwell AFB, Alabama, pp. 81-82; Lieutenant Colonel L.A. Neveleff, "Utilizing Russian Ground Sources for Implementing Strategic Target Information, Draft," 21 July, 1944, USAF Historical Research Center, Record 622.430-6, Maxwell AFB, Alabama.

61. Anderson, "Report on Visit to Russia by a Mission of USSTAF Officers,"; Kessler, "Progress of FRANTIC Project"; "Meeting at UUS Air Force Headquarters"; "Report on Conference regarding Intelligence and Reconnaissance Matters," 17 March, 1944, USAF Historical Research Center, Record 522.01-1, Maxwell AFB, Alabama; Lieutenant Colonel L.A. Neveleff, "Mission to Eastern Command, USSTAF," 5 August, 1944, USAF Historical Research Center, Record 622.430-6, Maxwell AFB, Alabama.

62. Stanley, World War II Photo Intelligence, pp. 60, 64, 359; USSBS, Aircraft Division Industry Report, pg 73.

63. "Conference Notes, 5 February, 1944"; Kessler, "Progress of FRANTIC Project."

64. Colonel Alfred A. Kessler, "Message to Spaatz," 30 May, 1944, USAF Historical Research Center, Record 622.430-6, Maxwell AFB, Alabama.

65. Anderson, "Report on Visit to Russia by a Mission of USSTAF Officers"; "FRANTIC History: Negotiation and Planning," Tab, Intelligence; Lieutenant General Carl Spaatz, "Message to Eaker, Kessler, Doolittle," 13 June, 1944, "Message to Doolittle, Kessler, Eaker," 30 May, 1944, Colonel Alfred A. Kessler, "Message to Eaker," 1 June, 1944, Lieutenant General Ira Eaker, "Message to Spaatz," 26 May, 1944, and "MAPRW to Eastern Command," 27 May, 1944, USAF Historical Research Center, Record 622.430-6, Maxwell AFB, Alabama.

66. Major General John R. Deane, "Message to Spaatz," 1 June, 1944; Deane, The Strange Alliance, pg. 118.

67. Kessler, "Diary: 5 February, 1944 to 7 May, 1944"; Kessler, "Progress of FRANTIC Project"; "American Bomber Photo Exhibit in Moscow," Information Bulletin, Embassy of the USSR, 27 June, 1944, pg. 4; Dewitt S. Copp, Forged in Fire (Garden City, N.Y.: Doubleday & Co., 1978), pg. 469.

68. Kessler, "Diary: 5 February, 1944 to 7 May, 1944"; Deane, The Strange Alliance, pp. 237.

69. Deane, The Strange Alliance, pp. 50, 229-236; "Personal Communication, William Averell Harriman to President Roosevelt," 11 June, 1944 in Europe (1944), pp. 965-966; "Excerpts from U.S. Military Mission Notes," 1944, USAF Historical Research Center, Record 522.01-1, Maxwell AFB, Alabama; Matloff, Strategic Planning for Coalition Warfare, pg. 70.

70. "Supreme Allied Commander's Conference, Russian Air Force Detachment at Bari," 22 July, 1944 and "Message, AGWAR to AFHQ," 28 July, 1944, USAF Historical Research Center, Record 622.430-6, Maxwell AFB, Alabama.

71. Copp, Forged in Fire, pg. 469.

72. Deane, The Strange Alliance, pp. 111-112; Neveleff, "Utilizing Russian Ground Sources for Implementing Strategic Target Information"; Colonel Paul T. Cullen, "Eastern Command Targets," 11 July, 1944 and Lieutenant General Carl Spaatz, "Shuttle Bombing Operations," 28 April, 1944, USAF Historical Research Center, Record 622.430-6, Maxwell AFB, Alabama; Lieutenant General Carl Spaatz, "Shuttle Bombing Operations to Russia," 3 May, 1944, USAF Historical Research Center, Record 522.161, Maxwell AFB, Alabama; Russell F.

Weigley, Eisenhower's Lieutenants (Bloomington: Indiana Univ. Press, 1973), pp. 58, 60, 379.

73. "Command of AAF Troops in the USSR," 27 May, 1944 and Lieutenant General Carl Spaatz, "Message to Deane," 26 May, 1944, USAF Historical Research Center, Record 622.430-6, Maxwell AFB, Alabama; "Assumption of Command, General Order No. 6."

74. "History of Eastern Command, Chapter I: Strategy and Mission," pp. 55-56; Major General John R. Deane, "Message to Spaatz," 31 May, 1944, "MAASF Message to 15th Air Force," 27 May, 1944, and Lieutenant General Ira Eaker, "Message to Spaatz," 31 May, 1944, USAF Historical Research Center, Record 622.430-6, Maxwell AFB, Alabama; "FRANSTAT," 30 May, 1944, USAF Historical Research Center, Record 522.161, Maxwell AFB, Alabama; Deane, The Strange Alliance, pp. 117-118.

CHAPTER 3

EASTERN COMMAND IN OPERATION

JUNE, 1944 TO JUNE 1945

FRANTIC JOE

FRANTIC JOE began back on 3 May, 1944, when Lieutenant General Carl Spaatz notified the 15th Air Force that the opening shuttle mission would originate in Italy, not England. The 8th Air Force was too busy bombing targets in northern France in preparation for the D-Day invasion. 15th Air Force staff men labeled the effort FRANTIC JOE in a "sardonic" (in the words of the MAAF internal history) jibe at "Uncle Joe" Stalin. The mission outline included the 5th Bombardment Wing's shuttle mission in a program of 15th Air Force air attacks in the Balkans. The day the shuttle ran, most of the 15th Air Force's B-24s were to strike Szolnok, Hungary (later, a target for FRANTIC VII). By 31 May, 1944, as explained earlier, FRANTIC JOE was aimed at the rail facilities in Debrecen, Hungary. Debrecen was a rather routine POINTBLANK target, and despite some later American claims that it was a "tactical" objective forced on them by the Soviets, Debrecen fit into the 15th Air Force's ongoing war on Axis transportation networks.¹

Weather delayed FRANTIC JOE one day, but on 2 June, 1944, the 5th Bombardment Wing and its 325th Fighter Group escorts lifted off from Italy. General Eaker flew in the lead B-17, Yankee Doodle II, a

reference to Eaker's plane on the original 17 August, 1942 8th Air Force raid). The mission was marred at the outset when a P-51 crashed on takeoff in Italy, and five of the single-engine fighters turned back before reaching the Balkans. The target area was not defended, and Eaker's bombardiers smashed the marshalling yards in an extremely effective bombing run. Photographs taken the week after the raid showed over 200 boxcars strewn across the torn trackage, with serious damage to nearby locomotive barns, depots, and repair shops. One B-17 exploded as it pulled up into formation after bombing, but the freak loss had nothing to do with the enemy. The Luftwaffe did not challenge the American force.²(Figure 7)

In the Ukraine, anxious USAAF troops and curious UVS soldiers waited for Eaker's planes under cloudy, drizzling skies. All three fields had turned out for the first landing, and reporters from the Soviet, American, and British press were on hand. Besides Colonel Kessler and Major General Aleksandr Perminov (the two base commanders), dignitaries included W. Averell Harriman and his daughter Kathleen, Major General John R. Deane, Major General Robert L. Walsh (the new Eastern Command general, due to take over on 5 June, 1944), Lieutenant General of Aviation D. Grandal, and Soviet General Staff representatives Major General N.V. Slavin and Major General S. Levandovich. Unfortunately, the Soviet architect of FRANTIC, Colonel General A.V. Nikitin, could not be present to see his handiwork come to fruition. The bad weather worried the AAF men, who feared an embarrassing postponement. Then, at 1230 hours Poltava time, a flash message came in from Eaker. The mission was coming in to land.³

For the 5th Bombardment Wing, the flight itself rated routine. The big combat boxes churned eastward, crossing the Soviet-German

Figure 7

Mission : FRANTIC JOE

Air Force : 15th Air Force

Date of Operation : 2 June 1944

Task Force Units : 2nd Bombardment Group
 97th Bombardment Group
 99th Bombardment Group
 325th Fighter Group
 483rd Fighter Group

Mission Commander : Lt. General Ira Eaker

Target Attacked :
 2 Jun 44: Debrecen railyards, Hungary

Planned Bombloads :
 2 Jun 44: Debrecen: 4000 lbs.
 8 x 500 lb.

Bombs Dropped :
 2 Jun 44: Debrecen - 1040 x 500 lb. possible
 1030 x 500 lb. dropped (257.5 tons)

Unit Assessment of Bombing :
 2 Jun 44: Debrecen - Good

Effective on Target (direct hits) :
 2 Jun 44: Debrecen - 74 x 500 lb. (18.5 tons)

Losses :
 2 Jun 44: Debrecen - Launched: 130 B-17, 69 P-51
 Aborted: 5 P-51
 Attacked: 130 B-17, 64 P-51
 Landed : 129 B-17, 64 P-51
 Unknown: 1 B-17
 Crew Losses: 11 MIA

Claimed German Aircraft Losses : 0-0-0
 (Destroyed - Probable - Damaged)

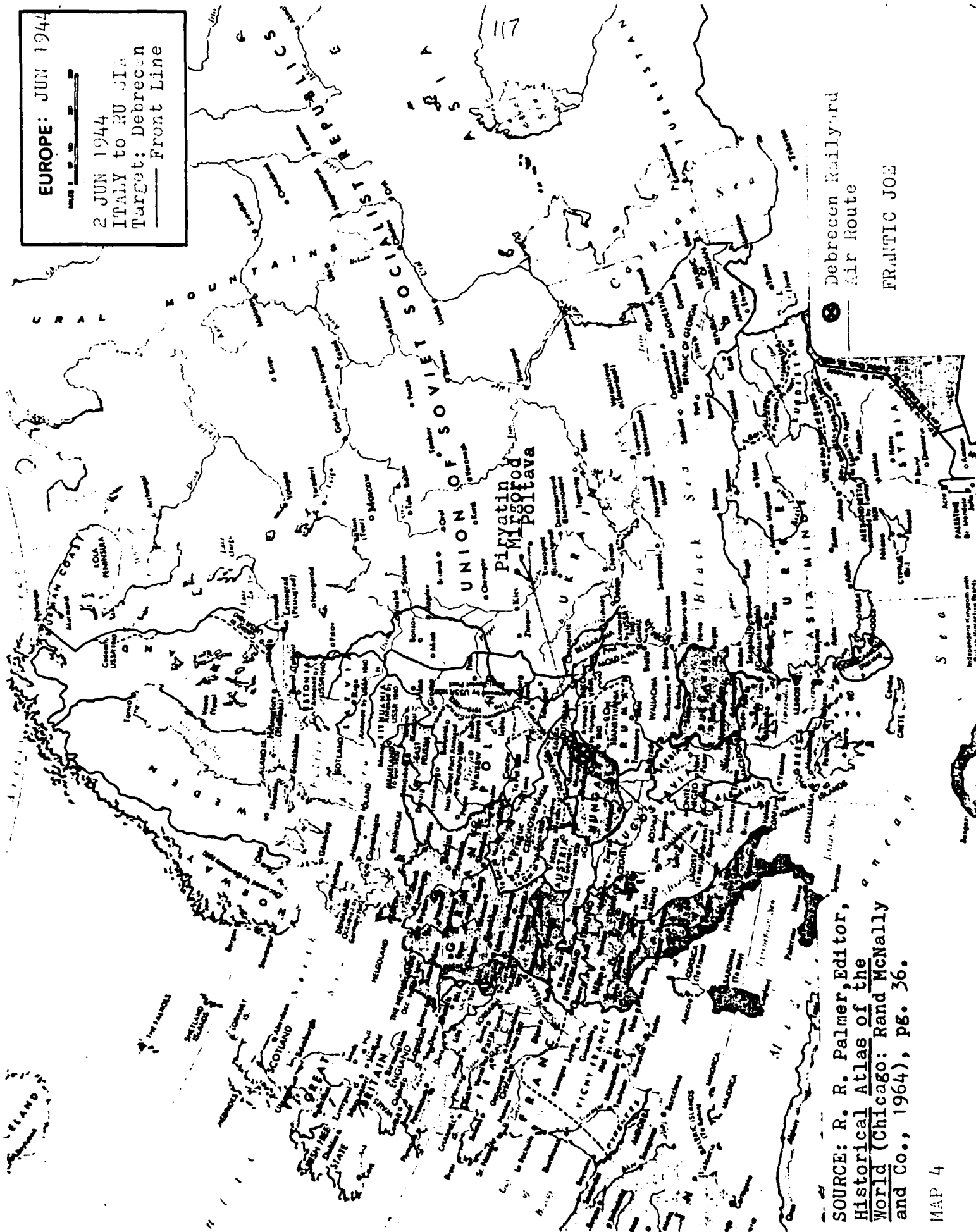
SOURCES: Brigadier General Lauris Norstad, "Memorandum to Air Commander in Chief," 12 June, 1944, USAF Historical Research Center, Record 622.430-6, Maxwell AFB, Alabama; "Debreczen (sic) Damage Assessment, with revision," June, 1944, USAF Historical Research Center, Record 622.430-6, Maxwell AFB, Alabama; "Eastern Command Narrative of Operations, 2 June, 1944," 1944, USAF Historical Research Center, Record 622.430-6, Maxwell AFB, Alabama; "Operations Summary," 16 June, 1944, USAF Historical Research Center, Record 522.01-1, Maxwell AFB, Alabama; Robert L. Walsh, "Eastern Command Fact Book" in Glenn B. Infield, The Poltava Affair (New York: Macmillan and Co., Inc., 1973), pp. 242-247.

front lines without incident. (Map 4) The foresight in requiring AACG homing systems paid off, as the ground observers watched the large arrays of silver bombers and nimble fighters break out of the leaden skies right on course around 1300 hours, Poltava time. As planned, Soviet fighters rose to guide the American planes in to the three runways. Americans and Russians on the ground were overcome with pride and emotion as the serrated ranks of four-engine planes droned overhead in a ceremonial pass. Hanniman's daughter Kathleen reported that Hanniman "said he'd never before been so thrilled by anything." She sat in the same Jeep as the normally stern Perminov, who she observed "bubbled over with joy," attempting to hug the frosty Ambassador and resorting to "a few Russian equivalents of the cowboy hoot." Deane called it "a thrill beyond description," though he observed wryly that the Russian female labor units did not start cheering until the first B-17 had safely landed and taxied on the landing mat runway. Once convinced that their labors had succeeded, the Russian girls joined in the cheering and applause that greeted the landing aircraft.⁴

Ceremonies came next, as Ina Eaker's Yankee Doodle II halted smartly before the gathered brass. Eaker hopped out of this first combat B-17 to land at Poltava, and immediately presented the Legion of Merit to Perminov, along with a personal letter of thanks from President Roosevelt and a cable of appreciation from Spaatz. (Another Legion of Merit, well-deserved, had been approved for the hard-working Nikitin.) For his part, Perminov presented roses to Kathy Hanniman and to General Eaker, explaining it as a Russian tradition for a "victorious" general. Perminov gave full credit to Alfred Kessler. The public welcoming extended to each crew, though it snagged a bit when the third B-17 to touch down blew a tire and momentarily blocked the

EUROPE: JUN 1944

2 JUN 1944
ITALY to RU JIA
Target: Debrecen
Front Line



SOURCE: R. R. Palmer, Editor,
Historical Atlas of the
World (Chicago: Rand McNally
and Co., 1964), pg. 36.

Debrecen Railroad
Air Route
FRANTIC JOE

metalled strip.⁵

General Deane witnessed an unusual sidelight to the tumultuous welcome in the soft rain. Deane's least favorite Soviet, the unctuous General Slavin, had been asleep in the headquarters building at 1300. After he heard the four-engine craft roaring overhead, Slavin awoke and rushed to the airfield. But by that time, USAAF ground crew sentries were in place around to taxiways, no doubt to keep exuberant Russians from dashing headlong into whirling propellers, loaded machine guns, and "hung" bombs. The G.I.s did not realize that Slavin was anyone important (or perhaps they did, but elected to exercise the universal military privilege of sentries' authority over their posts). In any event, the fuming representative of the Soviet General Staff endured the humiliation of watching the welcoming ceremonies from a good distance. No sooner had the little event concluded than Slavin, in Deane's words, "attacked Perminov," working himself into "apoplexy" over the supposed slight. Deane spent much of the evening reassuring Perminov that the incident might not be important. But for Perminov, it cast a pall over his celebration.⁶

The American press reaction was favorable, with the New York Times carrying the story on page one of the 3 June edition. The shuttle story was overcome on 4 June by the capture of Rome and on 6 June by the Normandy assault. Interestingly, the Times guessed the target as the oil center of Cluj, Rumania. They were not the only ones to get this detail wrong (and the others who muffed it were not under censorship). The Photographic Intelligence section part of FRANTIC's official history refers to the first raid as a refinery bombing that ended production until July; both Deane and Harriman stated that the target was an airfield, but both were certain it had been

destroyed.⁷ One could conclude that the raid's occurrence, not its details, was the real key here.

As for the Soviet Union's press, reaction was also very positive. All Allied photographs were released through Moscow. P. Lidov, a Pravda correspondent, remarked on the "orderly formations" of the long-distance flight, and noted that the AAF shuttle crews "will be the envy" of those who stayed in Italy. Lieutenant Colonel N. Denisov, writing for the Information Bulletin, Embassy of USSR, reported that the watchword from Soviet and U.S. fliers was "O.K." Izvestiya's reporter commented on the typically American songs and behavior of the FRANTIC JOE crews. All reports stressed the theme of Allied cooperation.⁸ How much the Soviet enthusiasm for shuttle bombing related to the closely proximate Second Front in Normandy is a matter of speculation, though one can certainly be sure that the D-Day attack did not hurt the prevailing atmosphere in the USSR.

American and Soviet soldiers related well during FRANTIC JOE. Both sides showed off their aircraft with pride, and American pilots saw that the Soviet fliers lavished attention on their P-39s and Yaks. Soviet VVS men put on folk song concerts and demonstrated some ethnic dances; the Americans scooped up the local Red Army women and showed their hosts the fine art of jitterbugging. Eaker even exceeded his own guidance and displayed the top secret H2X radar bombing gear to the VVS officers.

General Eaker displayed a remarkable political acumen. He met with V.M. Molotov in Moscow and talked the inscrutable Foreign Minister into allowing the AAF to bomb the Mielec, Poland aircraft runways and factories. (The weather intervened to preclude that raid.) Eaker came with a sheaf of impressive bombsight photographs from the

fine Debrecen effort, which Molotov found quite interesting and laudable. This meeting settled the question of target selection; after 5 June, 1944, Eastern Command chose targets as it pleased as long as they were west of the line Constanza/Ploesti, Rumania through Budapest, Hungary. Even sites east of there could be (and were) engaged with Soviet approval. Eaker's skillful talking secured full approval for so-called East-Target-East runs, a variation on the original US/USSR agreement. The talkative MAAF commander presented Nikitin's Legion of Merit (and another for Marshal Novikov) at a Moscow embassy dinner given by Harriman. Finally, on 10 June, Ina Eaker managed to establish the five air corridors needed for photoreconnaissance, with a ten hour notice rule to open or close these airways (the UVS and their PVO subordinates refused to permanently open corridors for fear of relaxed PVO vigilance and German treachery).⁹

While Eaker argued the shuttle bombing case at the Kremlin, his air crews celebrated D-Day, the 6th of June, by bombing the Luftwaffe airbase at Galati, Rumania. (Figure 8) The raid coordinated with 15th Air Force B-24 incursions against Ploesti, Rumania and Campino, Italy as well as UVS operations in the southwestern USSR. Of course, the Galati mission coincided with the portentuous events in northern France. The Galati mission featured the first use of incendiaries for FRANTIC, though several 97th Bombardment Group planes flew without incendiaries due to a lack of shackling gear (their partners in the 99th Group had extras but refused to deliver them). Available UVS incendiaries were incompatible with B-17 fittings. Bombing orders were late and contradictory, and missives from headquarters countermanded directives on the flightline. Poor pre-flight

Figure 8

Mission : FRANTIC JOE

Air Force : 15th Air Force

Date of Operation : 6 June 1944

Task Force Units : 2nd Bombardment Group
97th Bombardment Group
99th Bombardment Group
325th Fighter Group
483rd Fighter Group

Mission Commander : Lt. General Ira Eaker

Target Attacked :
6 Jun 44: Galati airbase, Rumania

Planned Bombloads :

6 Jun 44: Galati: 4000 to 4200 lbs.
16 x 250 lb. (85 planes)
42 x 100 lb. Incen. (27 planes)

Bombs Dropped :

6 Jun 44: Galati - 1360 x 250 lb. possible
1234 x 250 lb. dropped (154.25 tons)
1134 x 100 lb. Incen. possible
1026 x 100 lb. Incen. dropped (51.3 tons)

Unit Assessment of Bombing :

6 Jun 44: Galati - Good

Effective on Target (direct hits) :

6 Jun 44: Galati - 35 x 250 lb. (4.38 tons)
Incendiaries: Effective

Losses :

6 Jun 44: Galati - Launched: 112 B-17, 47 P-51
Aborted: 8 B-17*, 5 P-51
Attacked: 104 B-17, 42 P-51
Landed: 112 B-17, 45 P-51
Lost (Air): 2 P-51
Crew Losses: 2 MIA

Claimed German Aircraft Losses : 8-3-1
(Destroyed - Probable - Damaged)

*One B-17 unloaded its bombs on a small fighter airstrip.

SOURCE: Brigadier General Lauris Norstad, "Memorandum to Air Commander in Chief," 12 June, 1944, USAF Historical Research Center, Record 622.430-6.

Maxwell AFB, Alabama; "Eastern Command Narrative of Operations, 6 June, 1944," 1944, USAF Historical Research Center, Record 622.430-6, Maxwell AFB, Alabama; Galati P.R.U., 6 June, 1944," 6 June, 1944, USAF Historical Research Center, Record 622.430-6, Maxwell AFB, Alabama; "Operations Summary," 16 June, 1944, USAF Historical Research Center, Record 522.01-1, Maxwell AFB, Alabama; Robert L. Walsh, "Eastern Command Fact Book" in Glenn B. Infield, The Poltava Affair (New York: Macmillan and Co., Inc., 1973), pp. 242-247.

maintenance in Italy plagued the bombers (only 104 of 129 attacked the target), and a shortage of Russian assistance due to a mixup in the feeding schedule also hurt. The flight ended up almost an hour late on takeoff, but it was soon on the way to Rumania. (Map 5) The results of the confusion did not show at the target. Galati suffered heavy damage, with two major fires and over a dozen enemy airplanes destroyed on the ground. This time, Luftwaffe opposition took out 2 American fighters, and the U.S. claimed some enemy aircraft in the air engagement that ensued.¹⁰

FRANTIC JOE wrapped up with a flight to Italy, via the Focsani airdrome. (Figure 9) (Map 6) Eaker's men were off the mark on that mission, dumping most of their loads well north and west of the airbase. The fire bombs did little to help matters on the objective. A bomber and two fighters went down before light enemy opposition. The 15th Air Force units' repair and maintenance troubles kept fifteen planes behind in the USSR, a harbinger of things to come.¹¹

FRANTIC JOE was a success, though it left a sizeable number of aircraft behind. (Figure 10) The targets were not especially critical, though all three fit easily into the ongoing POINTBLANK/Oil Plan matrix. Mediterranean Allied Air Forces recognized the importance of FRANTIC JOE, and had sent an historian along to record his impressions. The "MAAF History of FRANTIC" explained that the targets were minor, but the real virtue of the mission rested in the strategic threat to the German "rear" (as if the Red Army hadn't fulfilled that role since 1941) and the "acid test" of US/USSR partnership between "Ivan Ivanovich" and "G.I. Joe."¹²

Some members of the American Army Air Forces viewed FRANTIC JOE as the foot in the door for much bigger things. On 4 June, 1944,

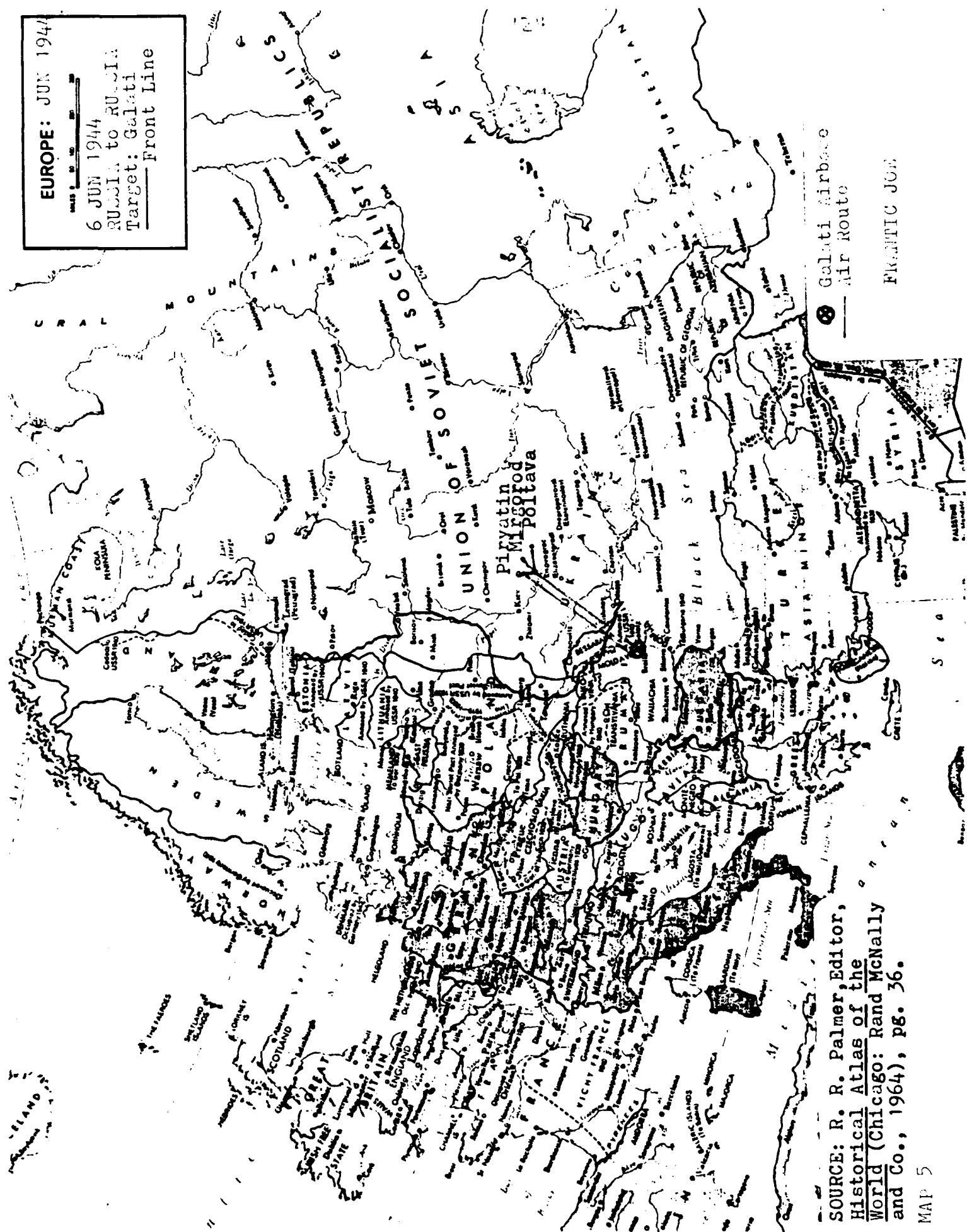
EUROPE: JUN 1944

6 JUN 1944

RUSSIA to RUSSIA

Target: Galati

Front Line



Galati Airbase

Air Route

FRANCIS JON

SOURCE: R. R. Palmer, Editor,
 Historical Atlas of the
 World (Chicago: Rand McNally
 and Co., 1964), pg. 36.

Figure 9

Mission : FRANTIC JOE

Air Force : 15th Air Force

Dates of Operation : 11 June 1944

Task Force Units : 2nd Bombardment Group
97th Bombardment Group
99th Bombardment Group
325th Fighter Group
483rd Fighter Group

Mission Commander : Lt. General Ira Eaker

Target Attacked :

11 Jun 44: Focsani airbase, Rumania

Planned Bombloads :

11 Jun 44: Focsani: 4000 to 4200 lbs.
16 x 250 lb. (96 planes)
42 x 100 lb. Incen. (33 planes)

Bombs Dropped :

11 Jun 44: Focsani - 1536 x 250 lb. possible
1424 x 250 lb. dropped (178 tons)
1386 x 100 lb. Incen. possible
1015 x 100 lb. dropped (50.8 tons)

Unit Assessment of Bombing :

11 Jun 44: Focsani - Good

Effective on Targets (direct hits) :

11 Jun 44: Focsani - 23 x 250 lb. (2.9 tons)
Incendiaries: Somewhat Effective

Losses :

11 Jun 44: Focsani - Launched: 129 B-17, 60 P-51
Aborted: 6 B-17, 7 P-51
Attacked: 121 B-17, 52 P-51
Landed: 122 B-17**, 52 P-51
Lost (Air): 1 P-51
Unknown: 1 B-17
Accidental Destruction: 1 P-51*
Crew Losses: 11 MIA

Claimed German Aircraft Losses : 5-0-1

(Destroyed - Probable - Damaged)

*Pilot recovered by air-sea rescue units. This plane was part of withdrawal support from 31st Fighter Group, Italy.

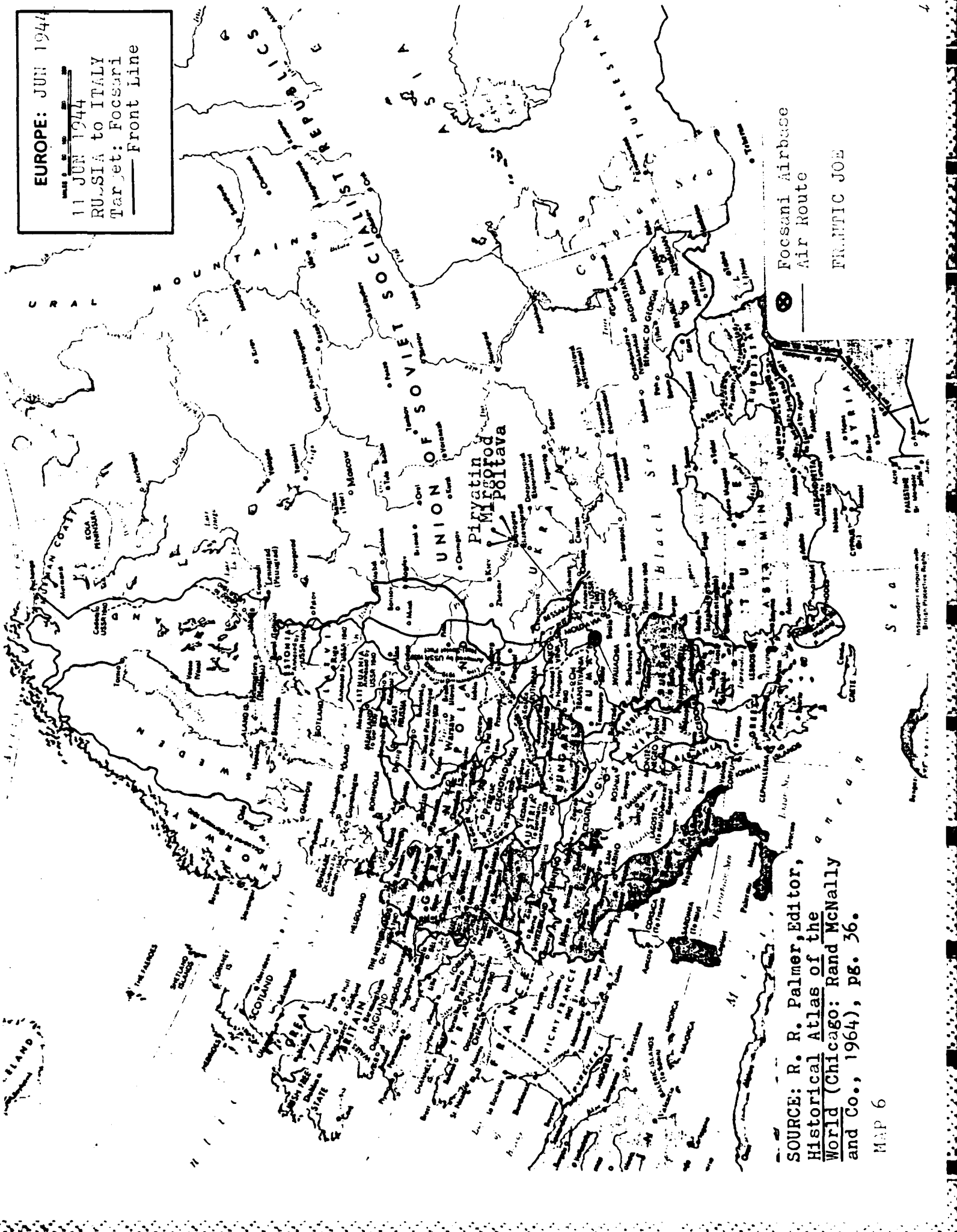
**One B-17 dropped early.

SOURCE: Brigadier General Lauris Norstad, "Memorandum to Air Commander

in Chief," 12 June, 1944, USAF Historical Research Center, Record 622.430-6, Maxwell AFB, Alabama; "Excerpt, MAAF Intops Summary No. 325, Focsani North Airdrome Installation, 5 Wing," 11 June, 1944, USAF Historical Research Center, Record 622.430-6, Maxwell AFB, Alabama; "Focsani Damage Assessment," June, 1944, USAF Historical Research Center, Record 622.430-6, Maxwell AFB, Alabama; "Operations Summary," 16 June, 1944, USAF Historical Research Center, Record 522.01-1. Maxwell AFB, Alabama; Robert L. Walsh, "Eastern Command Fact Book" in Glenn B. Infield, The Poltava Affair (New York: Macmillan and Co., Inc., 1973) , pp. 242-247.

EUROPE: JUN 1944

11 JUN 1944
RUSSIA to ITALY
Target: Focsani
Front Line



Focsani Airbase
Air Route

FRANCIS JOE

SOURCE: R. R. Palmer, Editor,
Historical Atlas of the
World (Chicago: Rand McNally
and Co., 1964), pg. 36.

Figure 10

Mission : FRANTIC JOE

Air Force : 15th Air Force

Dates of Operation : 2 June through 11 June 1944

Task Force Units : 2nd Bombardment Group
97th Bombardment Group
99th Bombardment Group
325th Fighter Group
483rd Fighter Group

Mission Commander : Lt. General Ira Eaker

Targets Attacked/Effective bomb tonnage :

2 Jun 44: Debrecen railyards, Hungary / 18.5 tons
6 Jun 44: Galati airbase, Rumania / 4.4 tons*
11 Jun 44: Focsani airbase, Rumania / 2.9 tons

Mission Totals : Aircraft Launched: 130 B-17, 69 P-51
 Aborted to Italy: 5 P-51
 Aircraft returned: 122 B-17, 52 P-51
 Aircraft lost: 2 B-17, 3 P-51
 Aircraft left for repair: 6 B-17, 9 P-51
 Crew losses: 24 MIA

Claimed German Aircraft Losses : 13-3-2
(Destroyed - Probable - Damaged)

*Effective incendiaries

SOURCES: Brigadier General Lauris Norstad, "Memorandum to Air Commander in Chief," 12 June, 1944, USAF Historical Research Center, Record 622.430-6, Maxwell AFB, Alabama; Robert L. Walsh, "Eastern Command Fact Book" in Glenn B. Infield, The Poltava Affair (New York: Macmillan and Co., Inc., 1973), pp. 242-247.

USSTAF logisticians began to plan for permanent basing of three bomb groups and one fighter group at Eastern Command, setting a 15 September, 1944 goal date. On 8 June, 1944, Spaatz asked Deane to seek another bomber base further west. The Military Mission in Moscow and USSTAF moved to capitalize on what they thought was an opportunity.

William Averell Harriman met with Stalin on 11 June, 1944, and found the Soviet premier exuberant about the first shuttle raids. Pressing on to the linked issue of Siberian basing, Marshal Stalin assured Harriman that airdromes near Vladivostok were under construction, and that six or seven would be for the AAF. Harriman's message observed that no specific date was set to begin discussions on the issue, though Stalin said "the sooner the better." Stalin asked when the UVS would receive its heavy bombers in Lend-Lease, but Harriman deflected that issue until the Far East airfield situation was resolved. Overall, it appeared that FRANTIC was nearing its prime objective.¹³

But was that objective still necessary? On 15 June, 1944, the first B-29s flew to bomb Japan from Chinese airstrips; that same day, American soldiers and Marines invaded the Marianas Islands at Saipan and Tinian Islands. Additionally, by the time Eaker returned to Caserta, Italy, American troops had established a firm beach head in Normandy with hardly a whimper out of the Luftwaffe.¹⁴ Since the German Air Force had also neglected to bother much with FRANTIC JOE, one could suppose (and rightly so) that the Luftwaffe was essentially finished.

There was a problem with photoreconnaissance flights that got overlooked in the post-JOE euphoria. A 15th Air Force recon pilot named Major Hoover "not cognizant that he must adhere strictly to the

flight plan," had gone all over southwest Russia on 15 June. He landed nonchalantly at an active Red Air Force base, risking the wrath of numerous PVO gunners. Major Hoover survived with a reprimand. It was a closer scrape for First Lieutenant David K. Rowe, who was shot down on 15 June, 1944 by UVS fighters when he strayed above 18,500 feet (the top of the air corridor). The UVS had been hunting a Luftwaffe Ju-88, a twin engine bomber that vaguely resembled Rowe's F-5. Rowe parachuted down, where he was met by local peasants who "wept and wrung their hands" when they saw Rowe was American. The Soviets apologized profusely and placed Rowe in the best hospital in Kiev.¹⁵ Both incidents demonstrated the necessity for strict adherence to flight routes in light of the PVO's "engage all not positively identified as friendly" orders.

The object of FRANTIC's attentions, the Germans, had not been totally inactive. As luck would have it, the B-17 lost over Focsani contained the official photographic record of FRANTIC JOE, replete with pictures of all American and Soviet activities at the Poltava air complex. German soldiers recovered over 500 pictures from the wreckage. By 15 June, 1944, General Rudolf Meister of the IV Fliegerkorps instructed Colonel Wilhelm Antrup to create a scheme for attack of the Eastern Command airdromes, all of which (as Nikitin warned so long ago) were former Luftwaffe posts.

USSTAF headquarters knew nothing of this. Orders went out on 10 June, 1944 alerting the 8th Air Force for FRANTIC II. 15th Air Force sent two experienced officers to brief 8th Air Force groups on what to expect in the USSR.¹⁶ One thing nobody expected was a visit from Colonel Antrup.

FRANTIC II and the Luftwaffe Riposte

Missions

The second mission to Germany originated from England, and it involved the 13th Bombardment Wing and the 45th Bombardment Wing (plus fighter escorts), both under flight supervision of Colonel Archie J. Old, Jr. of the 45th Wing. (Figure 11) FRANTIC II started on 21 June, 1944 as part of a huge combined air force attack pattern. The shuttle units flew in tandem with an 8th Air Force raid on Berlin, turning off to attack the Schwartzheide Fischer-Tropisch synthetic oil plant at Rhuland, Germany. Owned by Braunkohle-Benzin AG Brabag, Rhuland turned out oil using a chemical reaction process. With the Rumanian oil fields menaced by the Red Army, the 14,170 tons a month of synthetic oil produced at Rhuland made it a very important target. (Map 7) FRANTIC II was carrying out the Oil Plan in the intended sense, although the target was well within range for a standard English-based operation.

Colonel Old's units ran into trouble over the target, with the lead wing weaving back and forth waiting for the trailing groups to come off the target. Twenty five planes wandered off on their own to bomb some unknown target at Elsterwerde, Germany, and one plane offloaded its tonnage over Podlaska, Poland. Flak damage riddled the task force, compounded by a vigorous enemy air reaction over Brest-Litovsk, Poland. Weather over the USSR turned out to be thick and rainy over the front lines, but the AACS homing system guided the bombers and fighters into the three bases. The usual VVS escorts joined up about 30 miles inside the frontier. The skies were clear at

Figure 11

Mission : FRANTIC II

Air Force : 8th Air Force

Dates of Operation : 21 June 1944

Task Force Units : 95th Bombardment Group
 96th Bombardment Group
 100th Bombardment Group
 388th Bombardment Group
 390th Bombardment Group
 452nd Bombardment Group
 4th Fighter Group
 352nd Fighter Group

Mission Commander : Colonel Archie J. Old, Jr.

Target Attacked :

21 Jun 44: Rhuland Synthetic Oil Plant, Germany

Planned Bombloads :

21 Jun 44: Rhuland: 4000 to 4200 lbs.
 8 x 500 lb. (133 planes)
 42 x 100 lb. Incen. (38 planes)
 Leaflets (2 planes)

Bombs Dropped :

21 Jun 44: Rhuland - 1064 x 500 lb. possible
 777 x 500 lb. dropped* (194.3 tons)
 1596 x 100 lb. Incen. possible
 295 x 100 lb. Incen. dropped* (14.8 tons)

Unit Assessment of Bombing :

21 Jun 44: Rhuland - Good

Effective on Target (direct hits) :#

21 Jun 44: Rhuland - 100 x 500 lb. (25 tons)
 38 x 100 lb. Incen. (1.9 tons)

Losses :

21 Jun 44: Rhuland - Launched: 163 B-17, 70 P-51
 Aborted: 20 B-17, 5 P-51
 Attacked: 114 B-17, 65 P-51*
 Landed : 137 B-17, 63 P-51
 Lost (air): 1 P-51
 Lost (flak): 1 B-17
 Lost (ground): 47 B-17**
 Down in USSR: 7 B-17, 1 P-51
 Crew Losses: 2 KIA, 13 WIA, 11 MIA**

Claimed German Aircraft Losses : 7-1-5
 (Destroyed - Probable - Damaged)

* By error, 25 B-17s hit Elsterwerde, Germany and 1 B-17 bombed Podlaska,

Poland (not Biala Podlaska). No known military targets were struck at these "targets of opportunity."

** This includes 47 B-17s destroyed in the Luftwaffe raid on Poltava on 22 Jun 44. 2 crewmen were killed in action, and fourteen were wounded.

#Estimate based on U.S. Strategic Bombing Survey statistics. See Appendix Six for methodology.

SOURCE: Colonel Archie J. Old, "Report on Shuttle Mission to Russia," 6 July, 1944, USAF Historical Research Center, Record 522.01-1, Maxwell AFB, Alabama.; Robert L. Walsh, "Eastern Command Fact Book" in Glenn B. Infield, The Poltava Affair (New York: Macmillan and Co., Inc., 1973) , pp. 242-247.

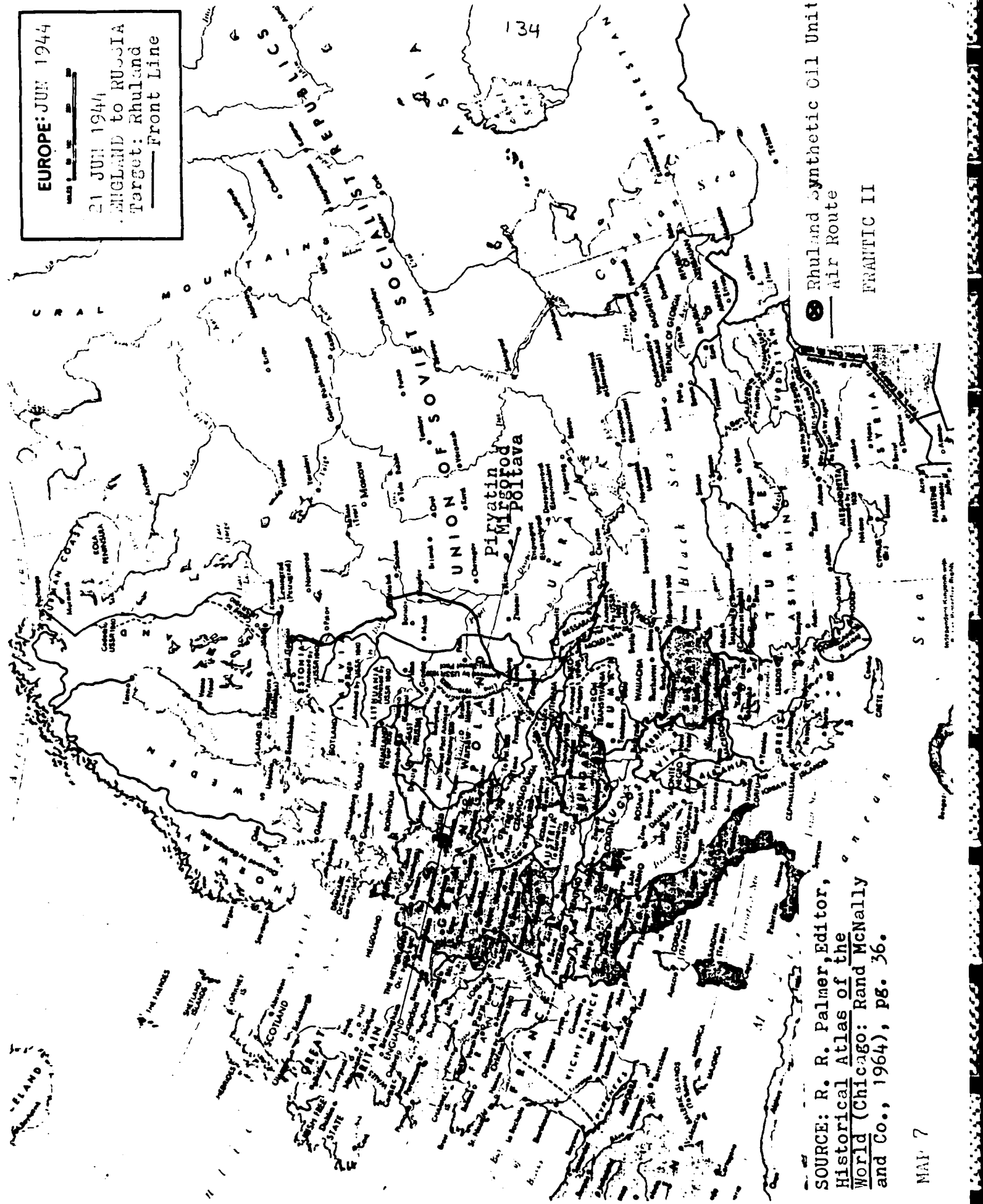
EUROPE: JUN 1944

21 JUN 1944

ENGLAND to RUSSIA

Target: Rhuland

Front Line



SOURCE: R. R. Palmer, Editor,
Historical Atlas of the
World (Chicago: Rand McNally
and Co., 1964), pg. 36.

the air complex, and the big formations wheeled into land. Eight planes landed or crashed elsewhere in the Ukraine.¹⁷ Old's crews had not had a very easy day.

The light bombs and usual bomb dispersion ruled out a decent bomb pattern at Rhuland, a situation aggravated by the fact that out of 266 tons of high explosives and about 80 tons of little 100 pound incendiaries, only around 194 tons of high explosives and merely 15 tons of fire munitions even got dropped on the synthetic oil installation. Using USSBS statistical analysis, Rhuland probably lost about fourteen percent of monthly production (just under 2,000 tons). Amazingly, reporters interviewing the bombing crews discovered that most did not even know what they bombed, though most thought it was a rubber factory. Soviet press people were shocked when a weary AAF captain was utterly unconcerned about what his crew had struck.

18

American reporter W.L. White found that the visiting 8th Air Force crews were very excited about flying the "longest mission" in 8th Air Force history. Gunners and navigators told White that the men back in England were very disappointed that they did not get to go along, and even the cooks had tried to sign up.¹⁸ That attitude would be markedly shaken over the next few days.

The FRANTIC II task force bombed another oil target on 26 June, 1944, attacking Dnrohobycz, Poland. (Figure 12) (Map 8) The Refinerja Galicja there cracked crude oil, delivering 28,300 tons per month of refined petroleum. The 8th Air Force bombers used small 250 pound bombs, with the resultant lack of serious damage. Still, USSBS estimating procedures reflect a likely enemy production deficit of 9% of monthly turnout (about 2500 tons). Fortunately for the bombers,

Figure 12

Mission : FRANTIC II

Air Force : 8th Air Force

Dates of Operation : 26 June 1944

Task Force Units : 95th Bombardment Group
 96th Bombardment Group
 100th Bombardment Group
 388th Bombardment Group
 390th Bombardment Group
 452nd Bombardment Group
 4th Fighter Group
 352nd Fighter Group

Mission Commander : Colonel Archie J. Old, Jr.

Target Attacked :
 26 Jun 44: Drohobycz Oil Refinery, Poland

Planned Bombloads :
 26 Jun 44: Drohobycz: 4000 lbs.
 16 x 250 lbs.

Bombs Dropped :
 6 Jun 44: Drohobycz - 1152 x 250 lb. possible
 1125 x 250 lb. dropped (140.6 tons)

Unit Assessment of Bombing :
 26 Jun 44: Drohobycz - Good

Effective on Target (direct hits) : *
 26 Jun 44: Drohobycz - 145 x 250 lb. (18.1 tons)

Losses :
 26 Jun 44: Drohobycz - Launched: 72 B-17, 58 P-51
 Aborted: 1 B-17, 3 P-51
 Attacked: 71 B-17, 55 P-51
 Landed: 72 B-17, 58 P-51
 Crew Losses: None

Claimed German Aircraft Losses : 0-0-0
 (Destroyed - Probable - Damaged)

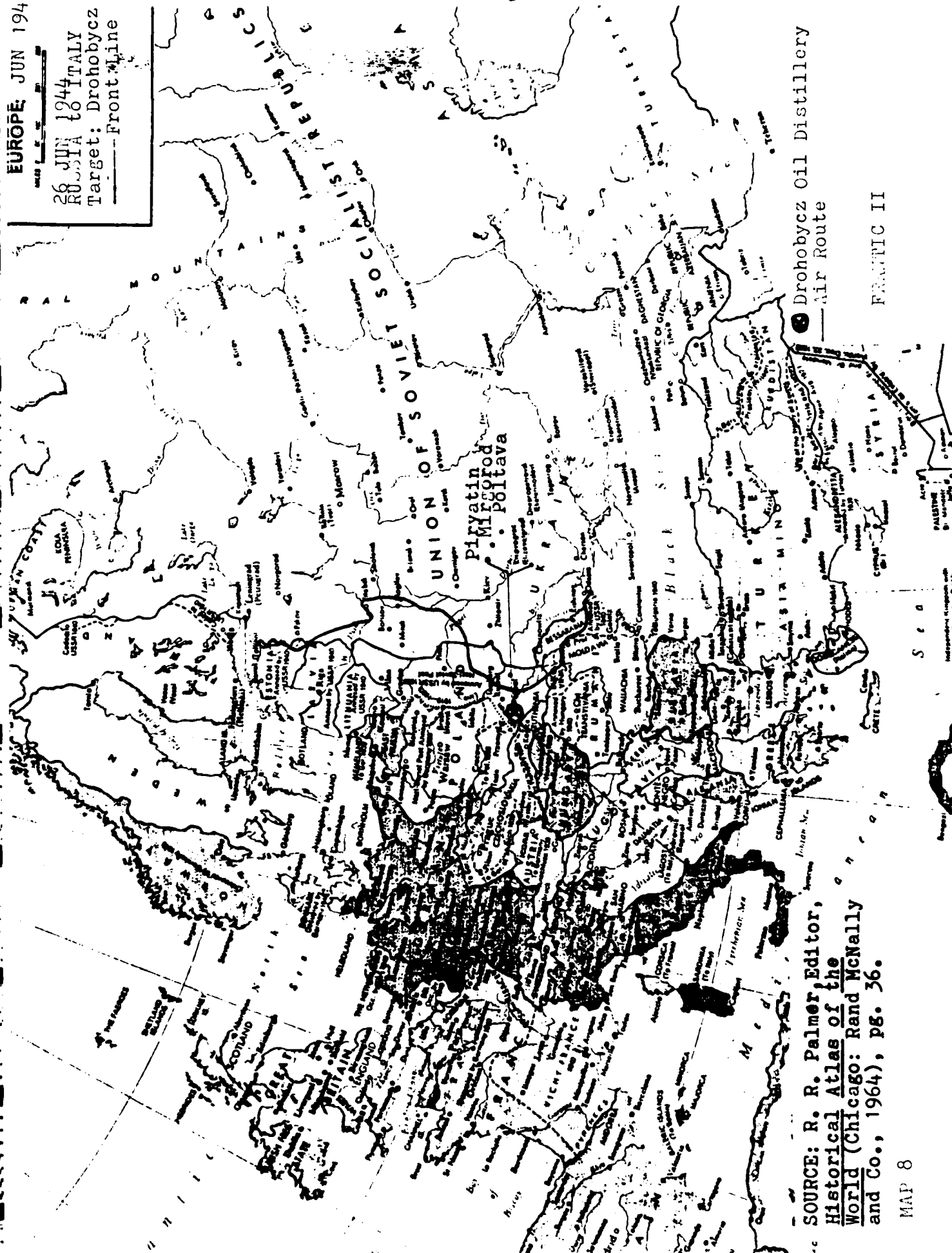
*Estimate based on U.S. Strategic Bombing Survey statistics. See Appendix Six.

SOURCE: Colonel Archie J. Old, "Report on Shuttle Mission to Russia," 6 July, 1944, USAF Historical Research Center, Record 522.01-1, Maxwell AFB, Alabama; Robert L. Walsh, "Eastern Command Fact Book" in Glenn B. Infield, The Poltava Affair (New York: Macmillan and Co., Inc., 1973), pp. 242-247.

EUROPE JUN 1944

26 JUN 1944
RUSSIA to ITALY
Target: Drohobycz
Front Line

136



Drohobycz Oil Distillery
Air Route

FRONTIC II

SOURCE: R. R. Palmer, Editor,
Historical Atlas of the
World (Chicago: Rand McNally
and Co., 1964), pg. 36.

MAP 8

there were no losses.²⁰ In all, FRANTIC II could have been a successful mission, hitting two important oil targets (admittedly with transitory effects) with moderate air to air losses. (Figure 13) But the Luftwaffe had spoiled the affair.

The German Raids

There were ample warnings that the Luftwaffe had designs on the Poltava air complex, though as always happens in this sort of thing, everything became much clearer in hindsight. Security violations, American complacency, Soviet equipment limitations, and German competence combined to create a disaster for the shuttle program.

In retrospect, Colonel General Nikitin was right back in February when he voiced objection to Poltava based upon previous German ownership. UVS airfields were simple grass strips and a few tents, with pilots sleeping right near their planes. Such strips could take a heavy pounding and recover with the aid of dragooned peasants and enough shovels to fill craters. As for the Soviet aircraft, they were mass-produced and essentially expendable, with most late-model Yaks constructed in large part of wood and fabric (as in World War I vintage craft). In essence, the best defense for a Soviet base was none at all, with production and simplicity as substitutes for complex radars and aircraft revetments.²¹ Poltava attracted Americans because it had facilities, ruined though they were. By June, 1944, the USAAF had created something the Luftwaffe rarely found on the Eastern Front--a lucrative, concentrated target.

Besides building at a former German field (even using the same taxiways and shop foundations), the Americans and Soviets did not

Figure 13

Mission : FRANTIC II

Air Force : 8th Air Force

Dates of Operation : 21 June through 26 June 1944

Task Force Units : 95th Bombardment Group
 96th Bombardment Group
 100th Bombardment Group
 388th Bombardment Group
 390th Bombardment Group
 452nd Bombardment Group
 4th Fighter Group
 352nd Fighter Group

Mission Commander : Colonel Archie J. Old, Jr.

Targets Attacked/Effective bomb tonnage :

21 Jun 44: Rhuland Synthetic Oil Plant, Germany / 25 tons**
 26 Jun 44: Drohobycz Oil Refinery, Poland / 18.1 tons

Mission Totals : Aircraft Dispatched: 163 B-17, 70 P-51
 Aborted to England: 20 B-17, 5 P-51
 Aircraft returned: 71 B-17, 58 P-51
 Aircraft losses: 51 B-17, 2 P-51*
 Aircraft left for repair: 21 B-17, 5 P-51*
 Crew losses: 2 KIA, 13 WIA, 11 MIA *

Claimed German Aircraft Losses : 7-1-5
 (Destroyed - Probable - Damaged)

* This includes 47 B-17s destroyed and 19 damaged in the Luftwaffe raid on Poltava on 22 Jun 44. 2 crewmen were killed in action.

** Incendiaries ineffective.

SOURCE: "Report of Proceedings of Board of Officers," 2 August, 1944, USAF Historical Research Center, Record 522.01-1, Maxwell AFB, Alabama; Robert L. Walsh, "Eastern Command Fact Book" in Glenn B. Infield, The Poltava Affair (New York: Macmillan and Co., Inc., 1973) , pp. 242-247.

alter their plans after discovering the German radio bomb back in late April. No Americans got excited when the B-17 full of photos from FRANTIC JOE was lost. German radars showed that FRANTIC II was heading east instead of turning around, but the Luftwaffe got a great break in establishing the U.S. destination. The flak Colonel Old encountered over Brest-Litovsk on 21 June, 1944 downed a fighter stocked with several marked maps and other documents that led the Germans to make an attack on 21 June, 1944.

Colonel Old observed a single-engine Luftwaffe "tailer" sniffing around below the American formation as it turned toward the Ukraine. Despite two escorting fighter groups, no P-51s managed to engage this surveillance craft. As the Americans landed, a German reconnaissance plane drew scattered antiaircraft fire from the women at Poltava. Reporter W.L. White asked a few AAF troops if the recon flight concerned them. A pilot responded that the Germans overflew England now and then but never bombed due to heavy British fighter and radar networks. "I haven't heard a bomb drop on our field since I came to England, and the Germans are only about two hundred miles away." Nikitin remarked that Kessler's staff regarded the Soviet defenses at Poltava with some irony, as the front line was over three hundred miles away and they had never seen a Luftwaffe attack.²²

Americans did little to prepare Eastern Command for any sort of air attack, though the Soviets had painted the mesh plates green and allowed grass to grow up. The UVS soldiers had also dug slit trenches for about 300 troops at each base, though Poltava alone disposed 370 permanent and 714 transient personnel on 21 June, 1944. AAF and Russian plane guards were posted (some of the Americans were asleep, not exactly the best way to stand guard), and the U.S. airmen left

their steel helmets in their aircraft as they went to the messhall to celebrate their arrival in the USSR with their UVS counterparts.

As the Americans and Soviets ate and drank (Colonel Old was Perminov's guest at dinner), Colonel Wilhelm Antrup organized and launched his raiding units. The Luftwaffe bombers were not new; the same types had bombed England in 1940. Escorting German fighters helped the formation crack through the Soviet frontal defenses, driving off Soviet night fighters in the moonlight. (Map 9) The Nazi fighters then pulled out, limited by range. The night grew darker as Antrup's planes neared the Eastern Command airstrips.

Meanwhile, at 2335, Perminov got word of a German flight heading for Poltava. The air raid alarm sounded, and most American fliers went to their trenches as the Soviet girls manned their antiaircraft guns. The overcast skies might have helped to hide the airfields; German pilots scheduled to hit Mingorod got confused and joined up with the Poltava force. A few AAF fliers assumed it was a false alarm and left their trenches. They were wrong.²³

Soviet antiaircraft guns opened up at 0015, as soon as aircraft were heard. Searchlights played on the underside of the clouds. Without radar, the Soviets relied on a barrage firing technique, "vomiting continuous fountains of fire" to create a wall of steel. However, the bright tracers and searchlight beams attracted the befuddled Germans, who had gotten misonoriented above the cloud cover. In essence, by choosing to defend the base the PVO gunners invited attack. Mingorod was not seen and, as noted, was not attacked.

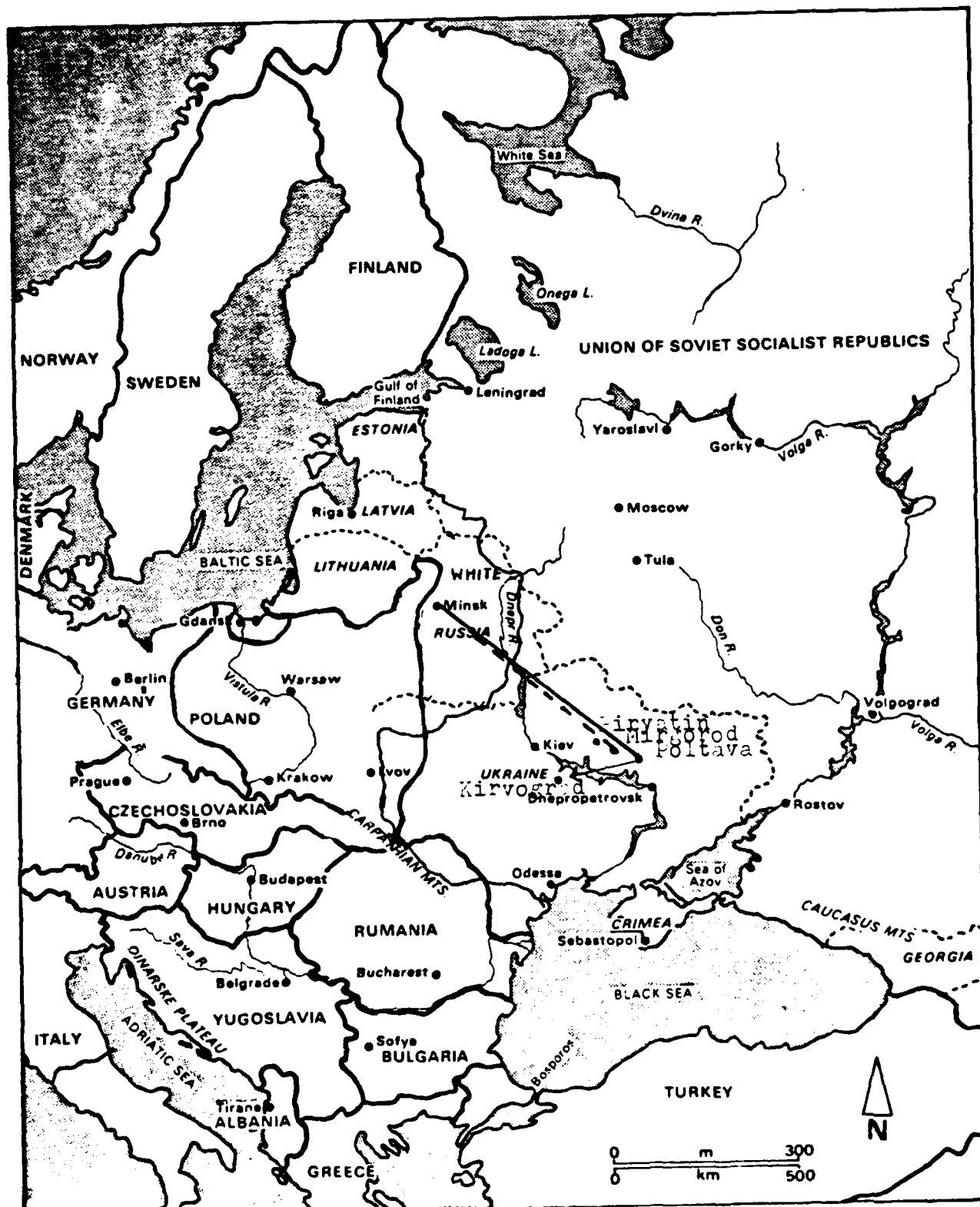
By 0030, the Germans began dropping flares, neatly spaced over the center of the airdrome. German aircraft descended to 5000 meter attack altitude. Then the bombing started, a cascade of huge 2000

SOURCE: Lester A. Sobel, Editor,
Maps on File (New York:
Facts on File, Inc., 1982)
 pg. 0.004

EASTERN EUROPE, June 1944
 German Air Raids 22-23 June

MAP 9

- 22 June Raid
- ← 23 June U.S. Movement
- - - 23 June Raid
- Front Line



Kilogram bombs and incendiaries. Antipersonnel bombs riddled the shiny silver B-17s, glaring in the flamelight. Soviet Yak pilots scrambled at Poltava; few got into the air. Night fighters from the 802d Night Fighter Regiment (probably from Mingonod) were up searching for the Nazi force; the cloud cover and lack of sophisticated radar on the UVS Pe-3s slowed their search rate. As for the PVO antiaircraft gunners, the Germans knocked out the fire direction center fifteen minutes into the raid. PVO fire was plentiful but useless as over 28,000 rounds went up.

The raid went on for until 0145, when something (apparently the meandering Pe-3 night fighters) interrupted the German raid. The field at Poltava was an inferno of burning planes and fuel, surrounded by a hellish racket of antiaircraft guns and detonating bombs. Some American fliers emerged during the lull; they were quickly driven back to cover as a flight of low-flying Ju-88s returned about 0200, firing machine guns and dumping many thousands of small, delayed action mines called "butterflies" (Nikitin called them "frogs"). The little booby-traps blanketed the entire field in order to frustrate UVS salvage attempts and fire fighters. And then the raid ended, about 0220 on 22 June, 1944, with a parting magnesium flare as the Germans popped a strike photo. (Figures 14,15) Two Americans died when they wandered out to watch the bombing; fourteen more were injured by flying fragments. Pilots who had dropped tons of bombs over Europe did not even realize what had happened. As one young lieutenant complained: "Gee, nothing like this ever happened in England."²⁴

The Soviet soldiers, many of them women, responded to the raid with experienced actions and valor, though the nervous PVO troops kept shooting for another hour. Americans were not permitted onto the

Figure 1-

Mission : Poltava Raid

Air Force : IVth Fliegerkorps, German Luftwaffe

Dates of Operation : 21 June through 22 June 1944

Task Force Units : Kampfgeschwader 4 (with one KG 3 group)
 Kampfgeschwader 27
 Kampfgeschwader 53
 Kampfgeschwader 55

Mission Commander : Colonel Wilhelm Antrup

Targets Attacked :
 22 Jun 44: Poltava/Mingorod/Piriyatin airbase, USSR

Planned Bombloads :
 22 Jun 44: Poltava:
 118 He-111, 24 Ju-88
 with unspecified mix of
 high-explosives, anti-
 personnel, 4.4 lb.
 incendiaries, and "butterfly"
 delayed action anti-
 personnel bombs; 6 Ju-88
 with marker flares

Bombs Dropped :
 22 Jun 44: Poltava:
 15.4 tons high explosives
 78.2 tons antipersonnel and
 "butterflies" (almost 50,000)
 17 tons incendiaries
 6 Ju-88 marked with flares

Unit Assessment of Bombing :
 22 Jun 44: Poltava - "Exemplary"
 Did not locate Mingorod/Piriyatin

Losses :
 22 Jun 44: Poltava - Launched: 118 He-111, 30 Ju-88
 Aborted: no record
 Attacked: 118 He-111, 30 Ju-88
 Lost: 2 He-111
 Landed: 116 He-111, 30 Ju-88

Mission Totals : Aircraft Launched: 118 He-111, 30 Ju-88
 Aircraft lost: 2 He-111
 Aircraft returned: 116 He-111, 30 Ju-88

Actual American/Soviet Losses, Poltava : U.S. losses: 47 B-17 bombers, 2 C-47 transports, 1 P-38 fighter, 2 KIA, 6 WIA, 6 trucks, 465 250 lb. bombs, 254,700 gallons fuel destroyed, as well as an unspecified amount of munitions.

Soviet losses: 15 Yak 9D, 6 Yak 7b fighters, 1 C-47 transport, 4 trainers, 30 KIA, 95 WIA.

SOURCES: "Enemy Air Attacks Against Eastern Command Bases," 25 June, 1944, USAF Historical Research Center, Record 522.01-1, Maxwell AFB, Alabama; "Report of Proceedings of Board of Officers," 2 August, 1944, USAF Historical Research Center, Record 522.01-1, Maxwell AFB, Alabama; Heinrich Hoffer, "A Lesson in Security" in Headquarters, U.S. Army Air Forces, Mediterranean Theater of Operations, Intelligence Section, Defeat (Washington, D.C.: Headquarters, Army Air Forces, 1946), pg.69; Hans Dieter Berenbrok [Cajus Bekker], The Luftwaffe War Diaries (London: Macdonald, 1966), pp. 355; A. Nikitin, "'Chelnochnye' operatsiy," Voenno-Istoricheshiy Zhurnal, 11, (1975), pg. 44-45.

Figure 15

Luftwaffe Timeline: 21-22 June, 1944

2015 21 Jun 44: Pilots alerted
2045 21 Jun 44: Aircraft boarded
2100 21 Jun 44: Engines started
2335 21 Jun 44: First warning received at Poltava
0015 22 Jun 44: Soviet guns opened fire
0030 22 Jun 44: First German flares opened over Poltava
0045 22 Jun 44: Soviet anti-aircraft direction center knocked out
0145 22 Jun 44: Nearby flight of Soviet Pe-3s drove off He-111s
0200 22 Jun 44: Ju-88 strafed airdrome, dropping "butterfly mines."
0220 22 Jun 44: Attack ended; photoflash flare for German reconnaissance
0330 22 Jun 44: Soviet anti-aircraft ceased fire

SOURCES: Dr. Bruce C. Hopper, "Interview with Brigadier General Alfred A. Kessler," 5 July, 1944, USAF Historical Research Center, Record 522.01-1, Maxwell AFB, Alabama; Heinrich Hoffer, "A Lesson in Security," in Headquarters, U.S. Army Air Forces, Mediterranean Theater of Operations, Intelligence Section, Defeated (Washington, D.C.: Headquarters, Army Air Forces, 1946), pg. 69; Glenn B. Infield, The Poltava Affair (New York: Macmillan Publishing Co., Inc., 1973), pp. 140-151.

blazing, mine-strewn parking aprons. Skillful sappers blew the little mines with cane poles, and Russian mechanics and medical personnel suffered heavy casualties to add to the toll on the gunlines. Poltava's runway was operational by 1300, 22 June, 1944. Dispensal fields were established on 22 June, 1944 around Kirovograd and Kharkov, and the Germans' follow-up raids the next night only burned up fuel at an empty Mirgorod the next night (and missed Pinyatin). (Figure 16) Total Soviet casualties were high, 34 killed and 126 wounded, including Pravda writer P. Lidov. Aircraft losses were considerable as well, and included most of the B-17s, plus twenty one Yaks at Poltava and three P-39s at Mirgorod.²⁵

Aftermath

Two questions arose from the surprise raids. The first concerned the "why" of the attack, and the second revolved around what to do about it. The Soviets had voted with their blood to keep the base solvent and save lives and planes. The Russians had immediately provided spots at nearby active UVS airdromes, despite the start of Operation BAGRATION (the attack in Belorussia) on 22 June, 1944. But the PVO's performance had been quite inadequate.

Equipment was at the root of the problem at Poltava. The Yaks were day fighters; the P-39s were American give-aways "never used as a first line combat plane" by the USAAF. The Pe-3 night fighters lacked sophisticated on-board radars. The standard Russian 37mm cannon and 12.7mm machinegun could not hit the attacking aircraft due to lack of range. Although Colonel Old insisted that the Soviets had "88mm" guns (presumably 85mm), most U.S. post mortems gave them credit for 37mm

Figure 16

Mission : Mirgorod-Piryatin Raids

Air Force : IVth Fliegerkorps, German Luftwaffe

Dates of Operation : 22 June through 23 June 1944

Task Force Units : Kampfgeschwader 4 (with one KG 3 group)
 Kampfgeschwader 27
 Kampfgeschwader 53
 Kampfgeschwader 55

Mission Commander : Colonel Wilhelm Antrup

Targets Attacked :
 23 Jun 44: Mirgorod/Piryatin airbases, USSR

Planned Bombloads :
 23 Jun 44: Mirgorod/Piryatin:
 116 He-111, 24 Ju-88
 with unspecified mix of
 high-explosives, anti-
 personnel, 4.4 lb.
 incendiaries, and "butterfly"
 delayed action anti-
 personnel bombs; 6 Ju-88
 with marker flares

Bombs Dropped :
 23 Jun 44: Mirgorod/Piryatin:
 Tonnage not estimated
 6 Ju-88 marked with flares

Unit Assessment of Bombing :
 23 Jun 44: Mirgorod/Piryatin - No record

Losses :
 23 Jun 44: Mirgorod/Piryatin - Launched: 116 He-111, 30 Ju-88
 Aborted: no record
 Attacked: 116 He-111, 30 Ju-88
 Landed: 116 He-111, 30 Ju-88

Mission Totals : Aircraft Launched: 116 He-111, 30 Ju-88
 Aircraft returned: 116 He-111, 30 Ju-88

Actual American/Soviet Losses, Mirgorod/Piryatin : U.S. losses: 101,500 gallons fuel destroyed, as well as an unspecified amount of munitions. Soviet losses: 3 P-39D fighters, 4 KIA, 31 WIA*

*6 WIA near Piryatin, though Germans missed the field.

SOURCES: "Enemy Air Attacks Against Eastern Command Bases," 25 June, 1944, USAF Historical Research Center, Record 522.01-1, Maxwell AFB, Alabama; "Report of Proceedings of Board of Officers," 2 August, 1944, USAF Historical Research

Center, Record 522.01-1, Maxwell AFB, Alabama; Heinrich Hoffer, "A Lesson in Security" in Headquarters, U.S. Army Air Forces, Mediterranean Theater of Operations, Intelligence Section, Defeat (Washington, D.C.: Headquarters, Army Air Forces, 1946), pg.69; Hans Dieter Berenbrok [Cajus Bekker], The Luftwaffe War Diaries (London: Macdonald, 1966), pp. 355; A. Nikitin, "'Chelnochnye' operatsiy," Voenno-Istoricheshiy Zhurnal, 11, (1975), pg. 44-45.

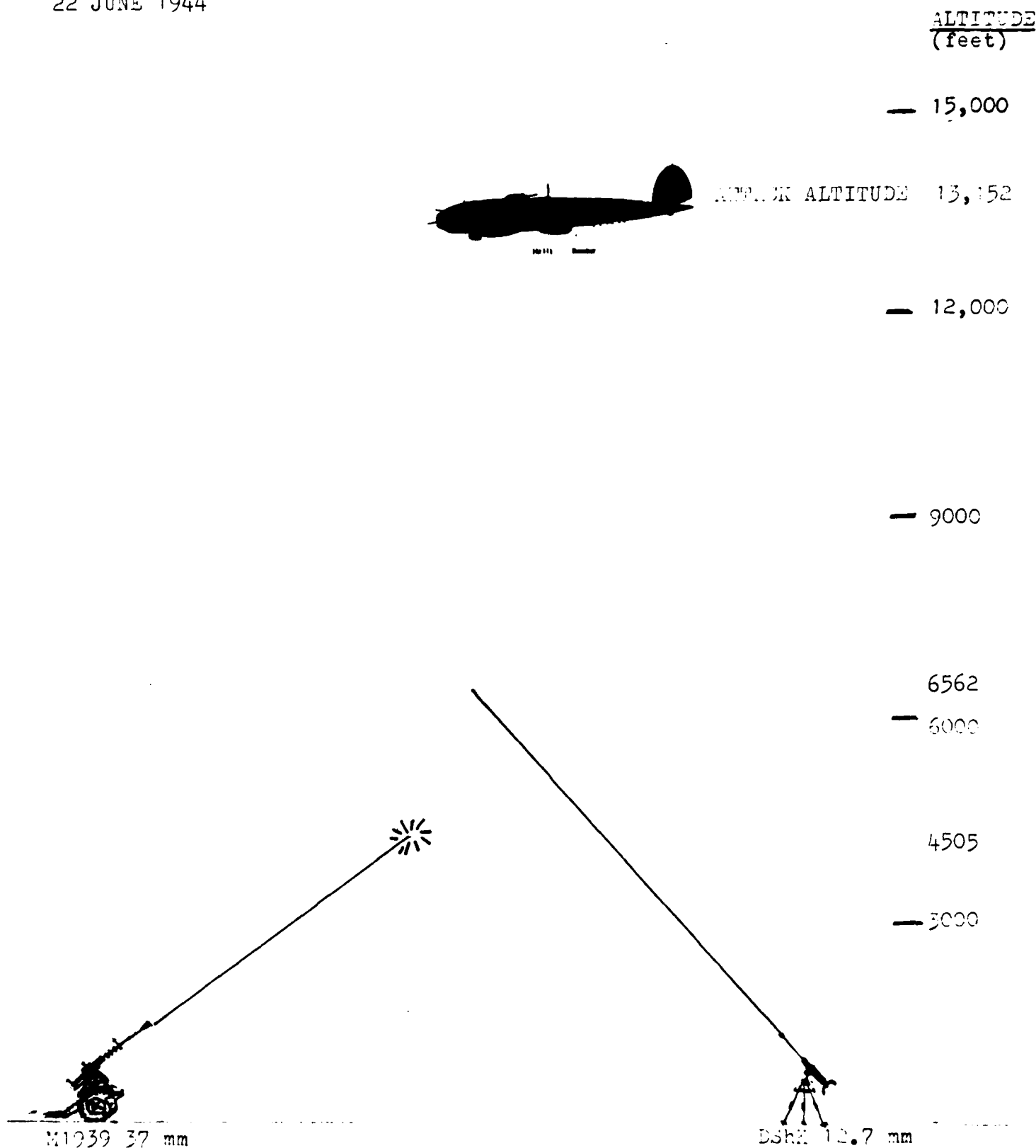
guns alone. This would be quite sensible, given the typical arrangements of a Soviet Antiaircraft Division, in that three regiments used 37mm and but one used 85mm guns. The short range guns could have raised quite a fine curtain, but to no avail. (Figure 17) An expert analysis of antiaircraft defenses indicated that the Soviets probably did pretty well to get two German He-111s with 28,000 small caliber rounds.²⁶ The German air tacticians knew their enemy's capabilities and flew above them.

Some loose talk has centered around the fact that American P-51s could have easily dealt with the raiders, if only the Soviets had let them take off. Colonel Old alleged this in his report, claiming that "German bombers were still over Russian territory at daybreak."²⁷ This might have been true (though unlikely, given speed and range factors), but the P-51s had no radar and were 100 miles away from Poltava at Pinyatin. If they had lifted off in blackout into heavy clouds, they might well have had a series of tragic accidents, adding little to the defense. If Pinyatin had "lit up" to launch its fighter force, Germans could vector over to attack that base as well, using the light as a guide as at Poltava. There were no radars on the P-51s at Pinyatin and no ground control radars either. Finally, the American pilots had flown a nine hour combat mission, and their capacities might not have been very high. Colonel Old's argument seems fallacious in retrospect.

General Deane probably said it best when he stated that the German attack was one of those finely-crafted strikes that is fated to succeed regardless of anything the defenders could do. However, USSTAF in England saw the Poltava raid as another means of increasing its forces in the USSR. The fires were barely out at Poltava when earlier

150
FIGURE 17

SOVIET ANTIAIRCRAFT
DEFENSES: POLTAVA
22 JUNE 1944



SOURCE: Glenn B. Infield, The Poltava Affair (New York: Macmillan & Co., 1973), pp. 141, 145.

expansion plans were ordered to be revised.

The result was a rather contradictory package of proposals, which General Deane duly presented to his Soviet opposite numbers in late June, 1944. One plan, labelled the "maximum effort," envisioned a movement to bases west of Kiev, around Vinnitsa. USSTAF favored this plan, which basically took the 4 June supply planning guidelines and expanded them to their logical conclusion. Two combat wings, 18,500 troops, and a quarter million tons of supplies comprised the specifics. Deane was quite certain that this idea would never work, as it depended upon the use of the Dardanelles (under neutral Turkey's sway) to supply Vinnitsa.²⁸ This plan persisted, even as the Third Reich shrunk and American gains in France and Italy provided plenty of easily accessed forward basing.

A smaller plan, called the "revised plan," was actually briefed to Molotov just after the Poltava strike and got conditional Soviet approval. It proposed an increase to 8900 Americans, provision of U.S. 90 mm guns and P-61 night fighters, and one forward base near Vinnitsa. The combat units would still shuttle, not stay. The revised plan was seen as an opening toward GLACIER, with the supply routes of the Persian Gulf and Murmansk being used to start the supply buildup for the Siberian bases (still in limbo) as soon as the base defense units were in place. MAAF Commander Lieutenant General Eaker summarized the option in a telegram to USSTAF headquarters on 25 June, 1944, saying "think how long it has been" since Allied AA guns and night fighters had a chance to shoot at German planes. Eaker thought that without the American air defenders, shuttles were "completely jeopardized."²⁹

The Red Army's tanks and infantry had already solved the problem

by 3 July, 1944 when they took Minsk. The Ukrainian armies also joined the general offensive on 7 July, 1944. These operations pushed the German air arm far out of range of the Poltava complex by mid-July, obviating a need for any antiair concerns. But the Americans did not see the German air raid as a cause to quit in any case. On 22 June, 1944, Carl Spaatz assured General Walsh at Eastern Command that arrangements were underway to return the stranded B-17 crews and provide U.S. antiaircraft guns and night fighters. Spaatz assured all: "We intend to continue."³⁰

Fighter Missions

On 19 June, 1944, Lieutenant General Spaatz notified MAAF and 15th Air Force that they would be providing the next shuttle force, about the same size as FRANTIC JOE. This information changed in the wake of the German assault on Poltava. By 2 July, 1944, the decision had been made to use P-38 fighter-bombers. These twin-engine craft could deliver a ton of bombs with proper rack assemblies. More importantly, they were small and capable of self-defense if another Nazi attack occurred. A shortage of P-38 spare parts led the 15th Air Force to switch to a mixed force of P-38 "Lightnings" and P-51 "Mustangs."

The P-38 fighter-bomber idea ran aground when the proper bomb fixtures could not be located. So, FRANTIC III changed emphasis to straight fighter strafing missions, though the elusive Mielec, Poland airfield was added to the target list. The 306th Fighter Wing, under Brigadier General Dean C. Strother, received that assignment for FRANTIC III. Strother, like MAAF commander Eaker, chose to lead the fighter shuttle personally. Consciously, the fighter officer emphasized the primary importance of demonstrating the power of the USAAF to the Soviets. Strother billed the entire concept as a way "to repay the German Air Force" for Poltava.³¹ The fighter version FRANTIC could keep the shuttle program alive while American commanders brought together the base defense components of the "revised" plan.

The interval between FRANTIC II and FRANTIC III, caused mainly by weather after about 10 July, saw several developments related to FRANTIC. At the Moscow Military Mission, General Deane briefed a

complete version of the "revised plan" on 13 July, 1944. Predictably, Nikitin favored the idea; Slavin was "alarmed." USSTAF began shifting forces and designating units for movement to the USSR.

The 8th Air Force did not rest idle while the 15th Air Force fighters prepared to shuttle to the Poltava area. The big bombers flew several massive daylight raids focused on blasting open holes in the German cordon around the Normandy beach head. Major missions included GOODWOOD on 18 July and COBRA on 24-25 July, 1944. 15th Air Force bombers turned from Southern France to Ploesti and then back again as they pounded strategic targets. With the invasion of Southern France slated for 15 August, 1944, the 15th Air Force heavy bombers were fully occupied.³² Given these commitments, one must wonder how many bombers could have been made available in any case.

Brigadier General Strother led his 306th Fighter Wing toward the Buzau/Zilistea area in Rumania on 22 July, 1944. (Figure 18) (Map 10) While the two P-38 groups ducked below the cloud deck to shoot up Buzau and Zilistea airdromes, the P-51s of 31st Group flew protective cover. Ground destruction claims totalled 41 planes, though this was not confirmed by photoreconnaissance. The Luftwaffe also met Strother's fighter wing, losing 15 more planes. Six P-38s went down, one in the USSR. On balance, and discounting the overclaiming of fighters, it was a fine start.

Three dispersal fields were used to spread the task force out the day after landing. The pilots at the satellite fields discovered bedbugs, lice, and diarrhea to be added "benefits" of dispersal. Overall, however, the fighter men found the local girls pretty in the face, though with "arms like the village smithy" (possibly from laying runway plates). Children waved at the white-stained planes. Area

Figure 18

Mission : FRANTIC III

Air Force : 15th Air Force

Dates of Operation : 22 July 1944

Task Force Units : 14th Fighter Group (P-38)
31st Fighter Group
82nd Fighter Group (P-38)

Mission Commander : Brigadier General Dean C. Strother

Targets Attacked :
22 Jul 44: Buzau and Zilistea airbases, Rumania

Planned Bombloads : None

Bombs Dropped : None

Unit Assessment of Bombing : Not applicable

Losses :
22 Jul 44: Buzau area - Launched: 76 P-38, 59 P-51
Aborted: 4 P-38, 12 P-51
Attacked: 72 P-38, 47 P-51
Landed : 66 P-38, 47 P-51
Lost (Air): 5 P-38
Down in USSR: 1 P-38
Crew Losses: 5 MIA

Claimed German Aircraft Losses : 56-6-23*

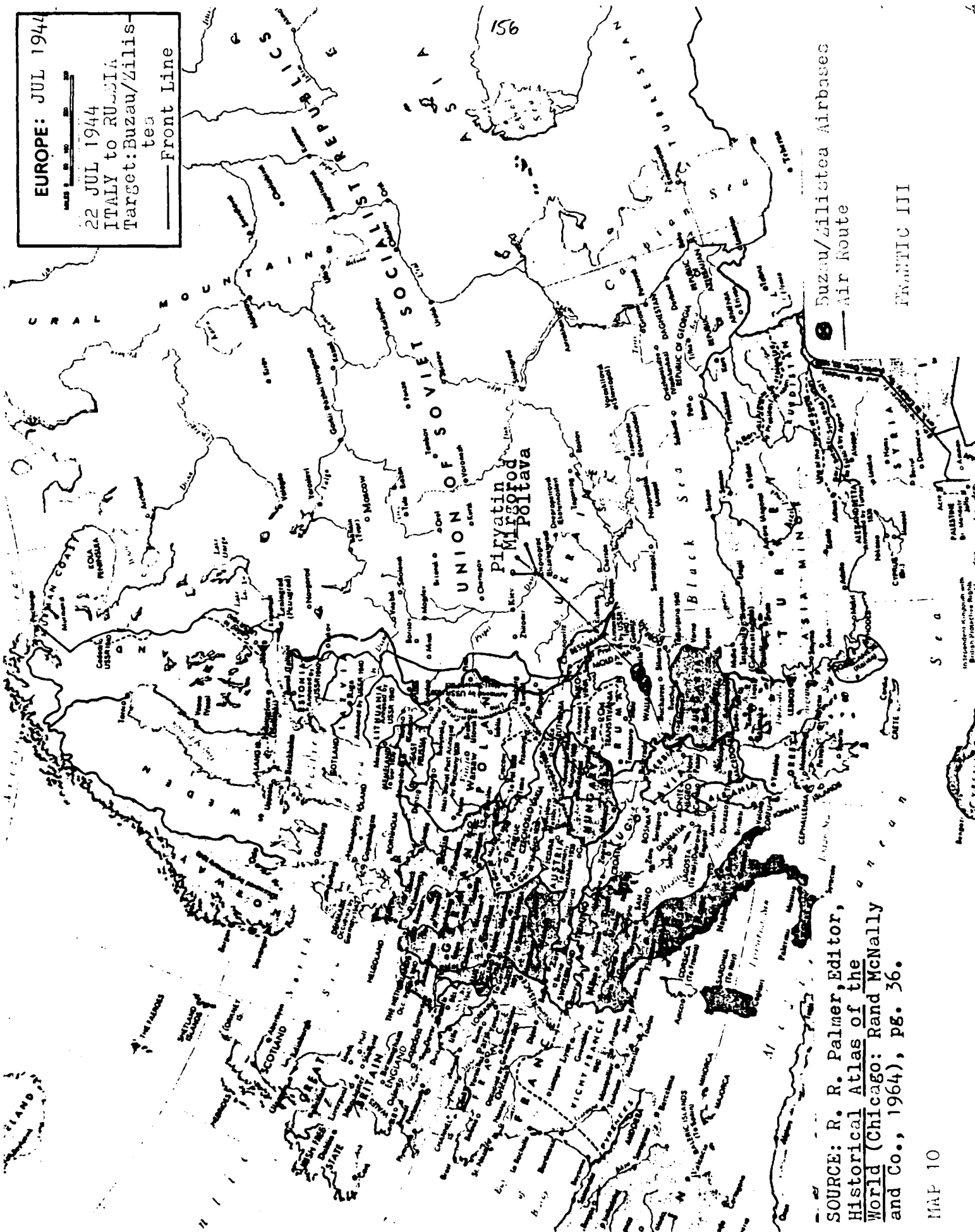
(Destroyed - Probable - Damaged)

* 41 claimed destroyed on ground; 15 claimed in the air.

SOURCE: "Item 12, Intops Summary No. 368, "24 July, 1944, USAF Historical Research Center, Report 622.430-6, Maxwell AFB, Alabama; Robert L. Walsh, "Eastern Command Fact Book" in Glenn B. Infield, The Poltava Affair (New York: Macmillan and Co., Inc., 1973) , pp. 242-247.

EUROPE: JUL 1944

22 JUL 1944
ITALY to RUSSIA
Target: Buzau/Zilistea
tea
Front Line



SOURCE: R. R. Palmer, Editor,
Historical Atlas of the
World (Chicago: Rand McNally
and Co., 1964), pg. 36.

civilians were friendlier in the outlying fields than at Poltava, and pilots soon found that an AAF wristwatch could bring more rubles than the standard five to one exchange on the dollar. Anti-aircraft shell fragments popped tires as the fighters taxied about, and about 4,000 leftover "butterflies" were collected at Poltava and Mingorod while the FRANTIC III planes stayed. As a gesture, the UVS troops provided a stage show full of jokes about how the Nazis must fear the American air attacks.³³

Major General Perminov asked Strother to attack Mielec, Poland for the Soviet Army, the first time such a direct request was made. By the time the weather cleared on 25 July, 1944, some Red army tanks were within fifty miles of Mielec. Strother took off on his support tasking, and his fighters enjoyed another fine day, mostly due to a fortuitous encounter. (Figure 19) (Map 11) The 31st Fighter Group caught an array of obsolescent German Ju-87 "Stuka" dive bombers as the American planes returned to Poltava. 21 Stukas were claimed. The 31st Group commander remarked: "We couldn't miss." The big kill on the way back made up for rather small effects on the nearly deserted Mielec runway.

Relations with the Soviets in the Poltava air complex took a turn for the worse after Mielec as several P-38 pilots came down with "some weird form of the G.I.s." Colonel Paul Cullen (Kessler's deputy) accused the Soviet messes; Kovalev, the Russian chief of staff, got the testimony of American surgeon Lieutenant Colonel Jackson that in fact American cooks had caused the dyspepsia and "runs." Fourteen pilots, including a deputy group commander, were left behind to recover when the 306th Wing returned through the Bucharest-Ploesti region.³⁴

Figure 19

Mission : FRANTIC III

Air Force : 15th Air Force

Dates of Operation : 25 July 1944

Task Force Units : 14th Fighter Group (P-38)
 31st Fighter Group
 82nd Fighter Group (P-38)

Mission Commander : Brigadier General Dean C. Strother

Target Attacked :
 25 Jul 44: Mielec airbase, Poland

Planned Bombloads : None

Bombs Dropped : None

Unit Assessment of Bombing : None

Losses :
 25 Jul 44: Mielec - Launched: 39 P-38, 39 P-51
 Aborted: 6 P-38, 5 P-51
 Attacked: 33 P-38, 34 P-51
 Landed: 33 P-38, 34 P-51
 Crew Losses: None

Claimed German Aircraft Losses : 38-12-10*
 (Destroyed - Probable - Damaged)

* 9 claimed destroyed on ground; 29 claimed in the air.

SOURCE: "Item 9, Intops Summary No. 370," 26 July, 1944, USAF Historical Research Center, Record 522.161-5, Maxwell AFB, Alabama; "FRANTIC III," 1 August, 1944, USAF Historical Research Center, Record 522.161-5, Maxwell AFB, Alabama; Robert L. Walsh, "Eastern Command Fact Book" in Glenn B. Infield, The Poltava Affair (New York: Macmillan and Co., Inc., 1973), pp. 242-247.

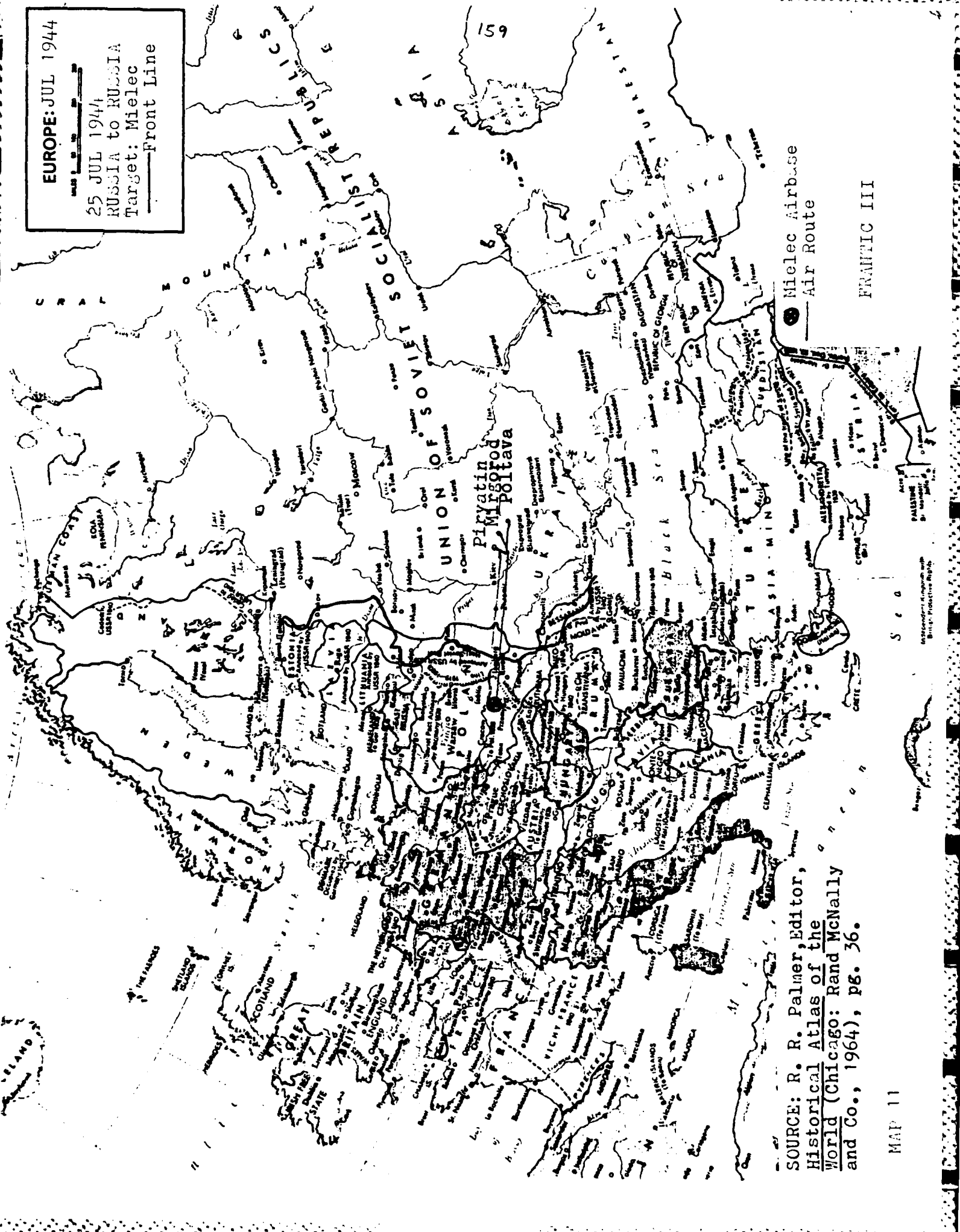
EUROPE: JUL 1944

25 JUL 1944

RUSSIA to RUSSIA

Target: Mielec

Front Line



Mielec Airbase
Air Route

FRANTIC III

SOURCE: R. R. Palmer, Editor,
Historical Atlas of the
World (Chicago: Rand McNally
and Co., 1964), pg. 36.

The military atmosphere at the bases was mixed. The FRANTIC III task force officers observed that the landing fields had been rendered practically invisible from the air. Although the fliers were not attacked, they stood strip alerts of four planes per runway. The fliers, especially in the account of Captain J.W. Sperling of the 31st Fighter Group, found the U.S. ground crews "still nervous" from the raids the month before. The Eastern Command soldiers complained that they felt "a bit futile" when no shuttles arrived, and that "sheer boredom nearly drove them insane."³⁵

Dean Strother directed his wing homeward after sweeping the Bucharest area on an "armed reconnaissance." (Figure 20) (Map 12) The fighters added to their score, losing two P-38s in the fray. Lieutenant Colonel Ben Mason led the last fourteen operational fighters back to Italy on 29 July, 1944, via Keckskemet, Hungary. (Figure 21) (Map 13) No enemy were encountered.

FRANTIC III rightfully rated as a success. The AAF awarded the Distinguished Unit Citation to the 31st Fighter Group for its performance outside Mielec. For a loss of only nine P-38s and seven men, Strother's pilots claimed one hundred and twenty enemy aircraft (a bit high, but good if it was but half correct). (Figure 22) The decision was made to go with another fighter mission before sending more bombers.³⁶

As FRANTIC III progressed and preparations began for FRANTIC IV, USSTAF actively readied its antiaircraft gun batteries and the 18 plane 427th Night Fighter Squadron (P-61 "Black Widows") for movement to the Ukraine, classifying the exercise as "Mission 16." Units received preliminary departure orders on 28 July, 1944. USSTAF received a study predicting an end of August arrival at Poltava for

Figure 20

Mission : FRANTIC III

Air Force : 15th Air Force

Dates of Operation : 26 July 1944

Task Force Units : 14th Fighter Group (P-38)
31st Fighter Group
82nd Fighter Group (P-38)

Mission Commander : Brigadier General Dean C. Strother

Targets Attacked :
26 Jul 44: Bucharest-Ploesti airbases, Rumania

Planned Bombloads : None

Bombs Dropped : None

Unit Assessment of Bombing : None

Losses :
26 Jul 44: Bucharest area - Launched: 55 P-38, 47 P-51
Aborted: 4 P-38
Attacked: 51 P-38, 47 P-51
Landed: 49 P-38, 47 P-51
Lost (Air): 2 P-38
Crew Losses: 2 MIA

Claimed German Aircraft Losses : 26-0-6 destroyed*
(Destroyed - Probable - Damaged)

* 6 claimed destroyed on ground; 20 claimed in the air.

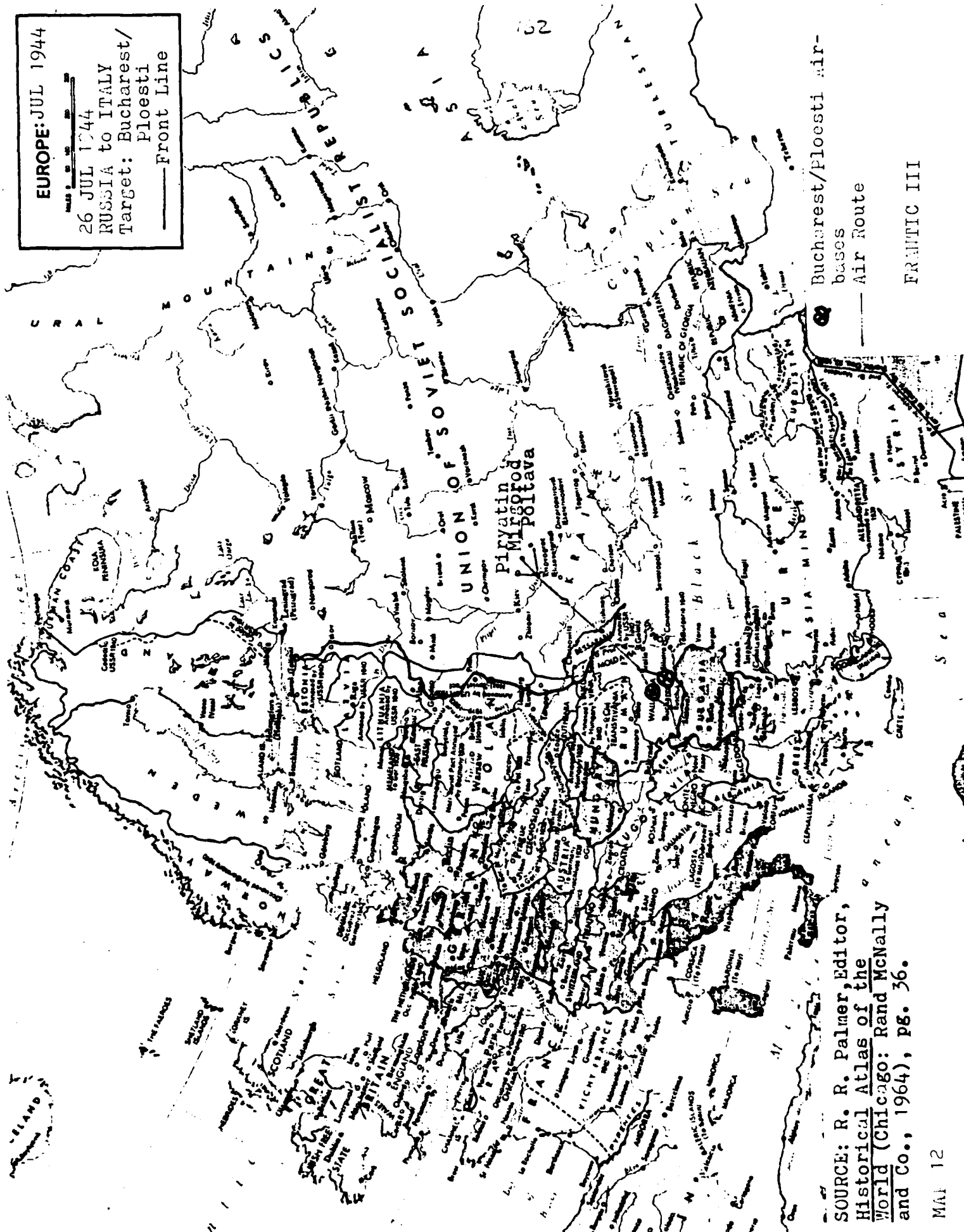
SOURCE: "Item 6, Intops Summary No. 370," 26 July, 1944, USAF Historical Research Center, Report 622.430-6, Maxwell AFB, Alabama; Robert L. Walsh, "Eastern Command Fact Book" in Glenn B. Infield, The Poltava Affair (New York: Macmillan and Co., Inc., 1973) , pp. 242-247.

EUROPE: JUL 1944

26 JUL 1944

RUSSIA to ITALY
Target: Bucharest/
Ploesti

Front Line



Bucharest/Ploesti Air-
bases
— Air Route

FRANTIC III

SOURCE: R. R. Palmer, Editor,
Historical Atlas of the
World (Chicago: Rand McNally
and Co., 1964), pg. 36.

Figure 21

Mission : FRANTIC III

Air Force : 15th Air Force

Dates of Operation : 29 July 1944

Task Force Units : 82nd Fighter Group (P-38)

Mission Commander : Brigadier General Dean C. Strother

Targets Attacked :

29 Jul 44: Keckskemet airbase, Hungary

Planned Bombloads : None

Bombs Dropped : None

Unit Assessment of Bombing : None

Losses :

29 Jul 44: Kecksemet -

Launched: 14 P-38*

Aborted: None

Attacked: None

Landed: 14 P-38

Claimed German Aircraft Losses : None

* 4 P-38s that were 26 July 44 aborts were in this flight.

SOURCE: "Narrative Account of Shuttle Mission to Russia (FRANTIC 3)," 1944, USAF Historical Research Center, Record 622.430-6, Maxwell AFB, Alabama; Robert L. Walsh, "Eastern Command Fact Book" in Glenn B. Infield, The Poltava Affair (New York: Macmillan and Co., Inc., 1973), pp. 242-247.

100 50 0

29 JUL 1944

RUSSIA to ITALY

Target: Kecs-kemet

Front Line

Kecs-kemet Airbase
Air Route

FRAMPTON III

SOURCE: R. R. Palmer, Editor, Historical Atlas of the World (Chicago: Rand McNally and Co., 1964), pg. 36.

MAP 13

Figure 22

Mission : FRANTIC III

Air Force : 15th Air Force

Dates of Operation : 22 July through 29 July 1944

Task Force Units : 14th Fighter Group
31st Fighter Group
82nd Fighter Group

Mission Commander : Brigadier General Dean C. Strother

Targets Attacked :

22 Jul 44: Buzau and Zilistea airbases, Rumania
25 Jul 44: Mielec airbase, Poland
26 Jul 44: Bucharest-Ploesti airbases, Rumania
29 Jul 44: Keckskemet airbase, Hungary

Mission Totals :

Aircraft dispatched: 76 P-38, 59 P-51
Aborted to Italy: 4 P-38, 12 P-51
Aircraft returned: 63 P-38, 47 P-51
Aircraft lost: 8 P-38
Aircraft left for repair: 1 P-38
Crew losses: 7 MIA

Claimed German Aircraft Losses : 120-18-39*
(Destroyed - Probable - Damaged)

* 56 claimed destroyed on ground; 64 claimed in the air.

SOURCE: "FRANTIC III," 1 August, 1944, USAF Historical Research Center, Record 522.161-5, Maxwell AFB, Alabama; Robert L. Walsh, "Eastern Command Fact Book" in Glenn B. Infield, The Poltava Affair (New York: Macmillan and Co., Inc., 1973) , pp. 242-247.

U.S. heavy 90mm antiaircraft guns with radar directors. The night fighters shipped out aboard the Royal Navy escort aircraft carrier HMS Puncher, destined for Cairo (where they would fly to Poltava). Required additional supplies for Mission 16 pushed along on a convoy to Murmansk, the first Northern convoy since the March transportation effort (the other three had gone by the preferred Iranian route). Finally, feeling that Nikitin's 13 July approval had assured the 8,000 man "revised" plan, General Spaatz asked Major General Deane and William Averell Harriman to present the "maximum effort" plan as the FRANTIC winter program.³⁷ However, the Soviets had yet to give actual permission for entry of the revised plan men and machinery. But the wheels were in motion nevertheless.

The FRANTIC IV mission commenced on 4 August, 1944 with a force of two groups, one of them the same 82nd Fighter Group whose P-38s had flown on FRANTIC III. The 306th Fighter Wing designated Focsani, Rumania as the target. As mentioned earlier, FRANTIC JOE's 11 June, 1944 strike had failed to cause major damage at the airfield. The 82nd Group and its 52nd Fighter Group (P-51) escorts left Italy determined to do some injury to the Luftwaffe at the base. (Figure 23)

Along the route (Map 14), the single-engine Mustangs flew top cover for the veteran shuttle pilots of the 82nd. This time, things did not turn out as well as on the previous fighter raids. German flak bursts, bad weather, and effective Luftwaffe opposition separated the two fighter groups. Both units suffered losses and serious battle damage, while the 82nd fliers accounted for only four enemy planes on the ground. The P-38s, finding most of the Luftwaffe up in the air to meet them, nosed down and strafed several trains in the local area. By the time FRANTIC IV made contact with friendly UVS forces, the fighter

Figure 23

Mission : FRANTIC IV

Air Force : 15th Air Force

Dates of Operation : 4 August 1944

Task Force Units : 52nd Fighter Group
82nd Fighter Group (P-38)

Mission Commander :

Target Attacked :
4 Aug 44: Focsani airbase, Rumania

Planned Bombloads : None

Bombs Dropped : None

Unit Assessment of Bombing : None

Losses :
4 Aug 44: Focsani - Launched: 45 P-38, 44 P-51
 Aborted: 2 P-38, 9 P-51
 Attacked: 43 P-38, 35 P-51
 Landed : 31 P-38, 30 P-51
 Lost (Air): 7 P-38, 2 P-51
 Down in USSR: 5 P-38, 3 P-51
 Crew Losses: 7 MIA

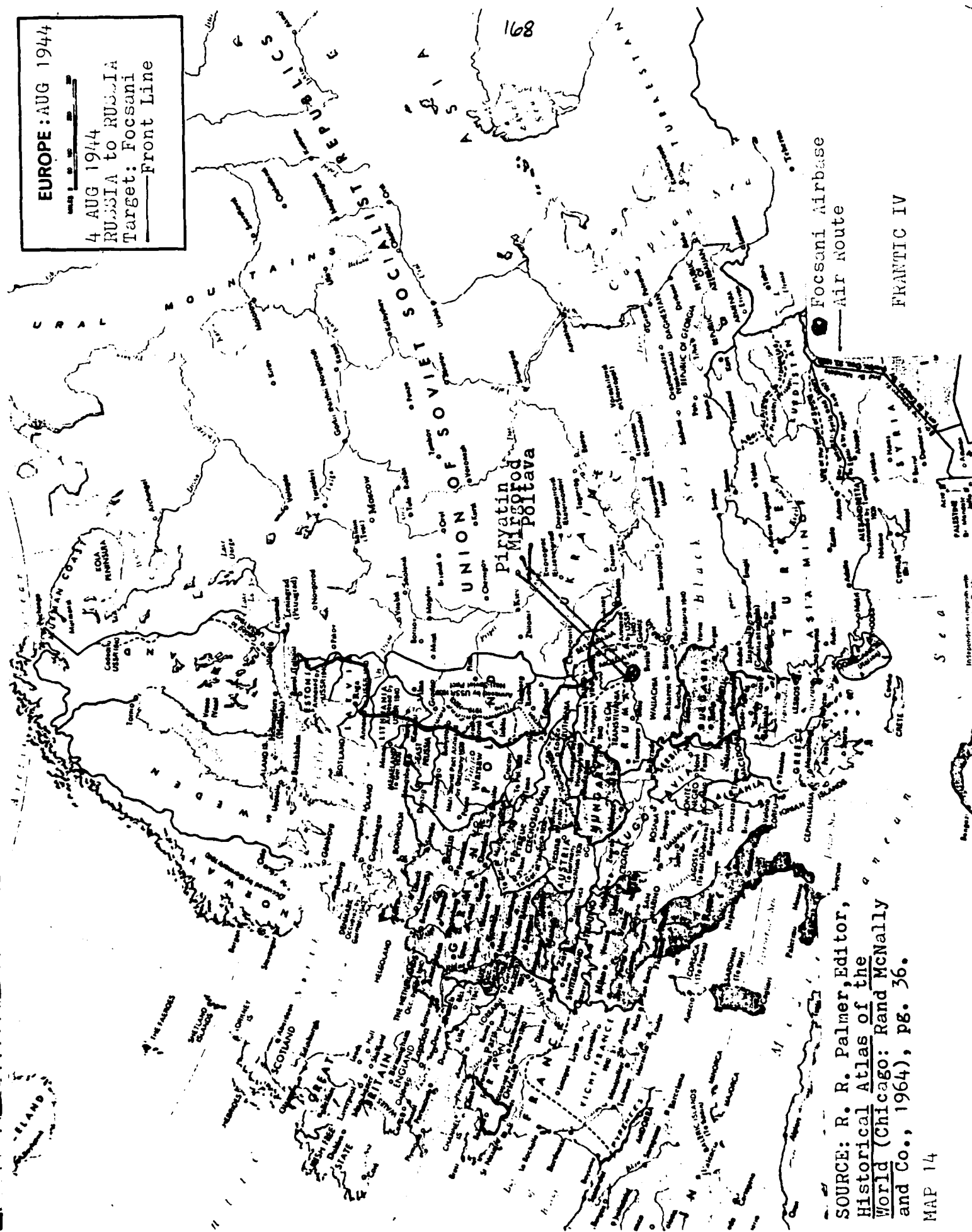
Claimed German Aircraft Losses : 4-0-7 destroyed*
(Destroyed - Probable - Damaged)

* 4 claimed on ground.

SOURCE: "Narrative Report, Mission No. 745, 82nd Fighter Group, Focsani, Rumania, 4 August, 1944," 4 August 1944, USAF Historical Research Center, Record No. 622.430-6, Maxwell AFB, Alabama; "Item 20, Intops Summary No. 381," 9 August, 1944, No. 622.430-6, Maxwell AFB, Alabama; Robert L. Walsh, "Eastern Command Fact Book" in Glenn B. Infield, The Poltava Affair (New York: Macmillan and Co., Inc., 1973) , pp. 242-247.

EUROPE: AUG 1944

4 AUG 1944
RUSSIA to RUSSIA
Target: Focsani
Front Line



SOURCE: R. R. Palmer, Editor,
Historical Atlas of the
World (Chicago: Rand McNally
and Co., 1964), pg. 36.

MAP 14

wing had disintegrated into fragmentary groups. Two P-38s bellied in at and around Poltava; others were condemned on the spot as damaged beyond repair. Two P-38s and two P-51s limped into Odessa; another P-38 made it to Krivoy Rog on a single engine. Fortunately, Soviet soldiers rescued several pilots. FRANTIC IV certainly had arrived in sorry shape.³²

American mission accounts concentrated on a spectacular rescue outside Focsani. Under Luftwaffe fire, Flight Officer Richard T. Andrews landed his P-38 near the crash site of First Lieutenant Richard Willis's P-38. Andrews scooped up the injured Willis and somehow fit both of them into his undamaged fighter, then took off. Andrews got the Silver Star for the exploit.³³ Though the heroism of the young pilot inspired his fellows, it did not absolve the mission of its dismal start.

FRANTIC IV concluded on 6 August, 1944. The shrunken force consisted of about two thirds of the original element that had left Italy on 4 August, 1944. The units coordinated their return-to-Italy sweep with the arrival of FRANTIC V, the only time this sort of event occurred at Eastern Command during the war. The FRANTIC IV flight aimed at the Zilistea airfield (struck on 26 July, 1944 by the 82nd Group and its FRANTIC III fellows). (Figure 24) 306th Wing also intended to cover the nearby Bucharest/Ploesti region.

Seven planes aborted back to the Poltava complex with mechanical troubles, reducing the battered wing by another ten plus percent. Either by design or by good fortune, the Luftwaffe did not intervene on this mission. Strafing P-38 Lightnings destroyed one lone He-111 German bomber. (Map 15) There were no U.S. casualties. Along the route, just past Zilistea, the P-38 Lightnings spotted an American

Figure 24

Mission : FRANTIC IV

Air Force : 15th Air Force

Dates of Operation : 6 August 1944

Task Force Units : 52nd Fighter Group
82nd Fighter Group (P-38)

Mission Commander : Not Recorded

Targets Attacked :
6 Aug 44: Zilistea airbase, Rumania

Planned Bombloads : None

Bombs Dropped : None

Unit Assessment of Bombing : None

Losses :
6 Aug 44: Zilistea - Launched: 30 P-38, 30 P-51
 Aborted: 4 P-38, 3 P-51
 Attacked: 26 P-38, 27 P-51
 Landed: 26 P-38, 27 P-51
 Crew Losses: None

Claimed German Aircraft Losses : 1 destroyed
 0 probable
 0 damaged

SOURCES: "Item 17, Intops Summary No. 381," 9 August, 1944, USAF
Historical Research Center, Record 622.430-6, Maxwell AFB, Alabama; Robert L.
Walsh, "Eastern Command Fact Book" in Glenn B. Infield, The Poltava Affair
(New York: Macmillan and Co., Inc., 1973) , pp. 242-247.

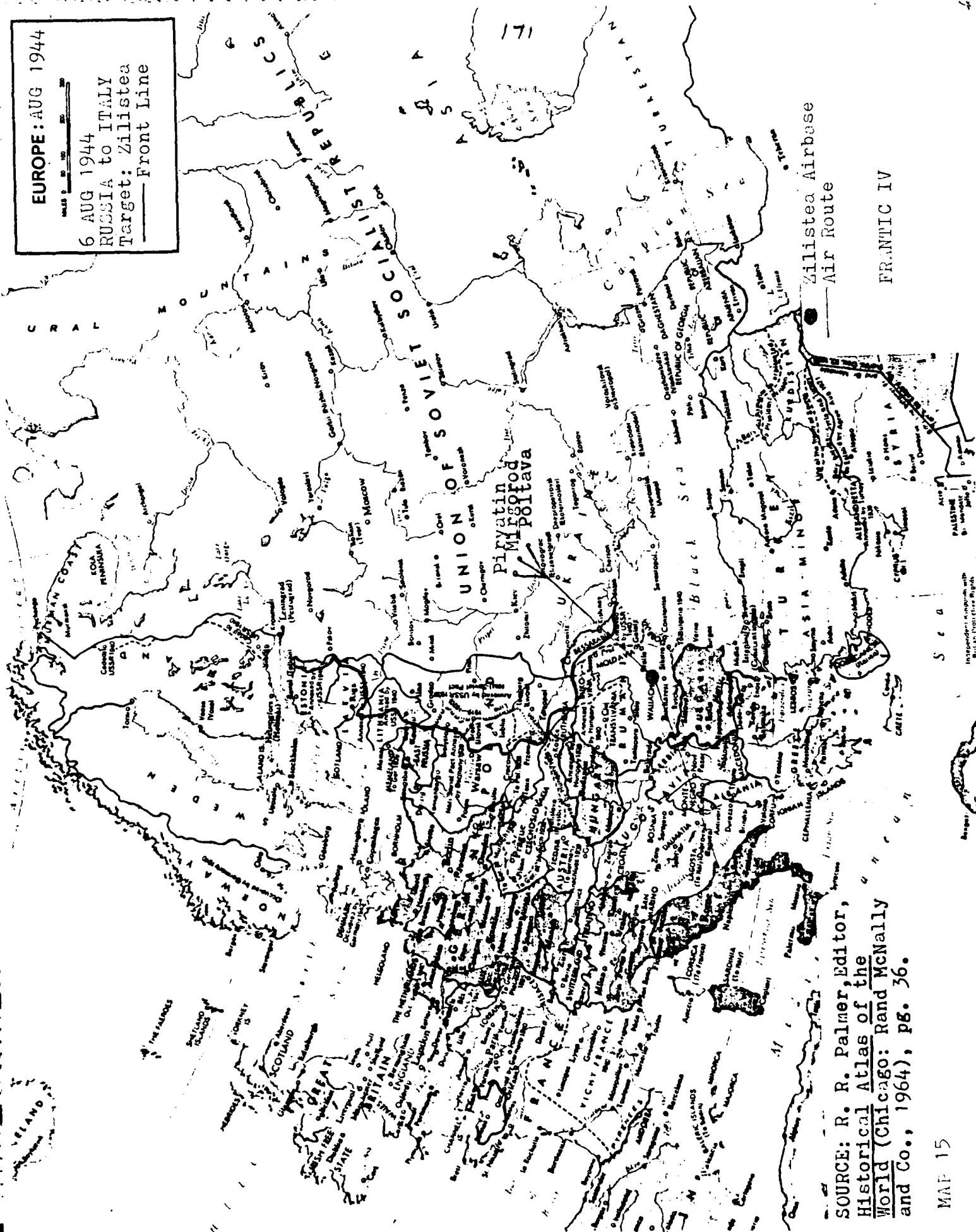
EUROPE: AUG 1944

SCALE 0 50 100 200

6 AUG 1944

RUSSIA TO ITALY

Target: Zilistea
— Front Line



SOURCE: R. R. Palmer, Editor,
Historical Atlas of the
World (Chicago: Rand McNally
and Co., 1964), pg. 36.

MAP 15

B-17 under camouflage nets.⁴⁰ This report added credence to UUS fears about Luftwaffe deceptions using captured American craft, though no such event marred any FRANTIC operation.

FRANTIC IV's official summary remarked that "shuttle missions had become almost routine."⁴¹ A sober assessment of FRANTIC IV indicated that perhaps the routine established was not a favorable one. (Figure 25) On balance, the two fighter missions had been a stop-gap measure. Fighter sweeps added marginally to the Combined Bombing Offensive goal of destroying the Luftwaffe. They did contribute to the goal of maintaining Soviet-American communications and continuing cooperation. One could argue that after a positive and a negative result in both fighter and both bomber missions, 6 August was as good a time as any to cut losses and pull out, or at least stop flying until the "revised plan" units got to the Poltava air complex. But General Spaatz and the Moscow Military Mission had big expansion plans on the table, and the Pacific basing issue was still very much alive. The dual nature of the shuttle raids (political goals vs. tactical considerations) had created the obvious situation that no senior USAAF officers expected. Shuttle raids would continue for purposes beyond the delivery of bombs on target, with resultant repercussions on Eastern Command morale and proficiency. But while Spaatz waited for Soviet answers (and the USSR Stavka considered the Revised, Maximum Effort, and GLACIER plans), all parties involved (including USSTAF) gave FRANTIC second thoughts. Meanwhile, Eastern Command trudged onward, and FRANTIC V flew.

Figure 25

Mission : FRANTIC IV

Air Force : 15th Air Force

Dates of Operation : 31 July through 6 August 1944

Task Force Units : 52nd Fighter Group
82nd Fighter Group (P-38)

Mission Commander : Unknown

Targets Attacked :

4 Aug 44: Focsani airbase, Rumania

6 Aug 44: Zilistea airbase, Rumania

Mission Totals : Aircraft dispatched: 45 P-38, 44 P-51
 Aborted to Italy: 2 P-38, 9 P-51
 Aircraft returned: 27 P-38, 27 P-51
 Aircraft lost: 7 P-38, 5 P-51
 Aircraft left for repair: 9 P-38, 3 P-51
 Crew losses: 7 MIA

Claimed German Aircraft Losses : 5-0-8*
(Destroyed - Probable - Damaged)

*5 claimed on the ground

SOURCE: Robert L. Walsh, "Eastern Command Fact Book" in Glenn B. Infield, The Poltava Affair (New York: Macmillan and Co., Inc., 1973) , pp. 242-247.

The End of FRANTIC

Mission Five

On 30 July, 1944, just after FRANTIC III left the Ukraine, Lieutenant General Carl Spaatz cabled Lieutenant General James Doolittle, commander of the 8th Air Force in England (and the same man who had led the first mission over Tokyo). The USSTAF general informed Doolittle that FRANTIC V was scheduled for 15 August. Spaatz envisioned a force of sixty to seventy B-17s and two groups of fighters. The 30 July cable included a recommendation to consider the use of fighter-bombers. Spaatz updated that guidance on 4 August, electing to try an 8th Air Force shuttle raid in concert with the return of FRANTIC IV to Italy and other air missions in northern Europe. Why had Spaatz determined to return to heavy bomber missions? The USAAF Mission 16 units were not in the Soviet Union, and no Soviet response had arrived as yet. The USSTAF general even suspended troop movements for Mission 16 on 4 August, 1944, allowing the Soviets until 14 August to allow the American units to enter the USSR.⁴² There is no record of Spaatz motivations, but his insistence on running FRANTIC V before 15 August might have reflected some final belief that perhaps a renewal of strategic bombing shuttles could positively influence the Soviet government.

In any event, FRANTIC V consisted of two bombardment groups and one fighter group. Both B-17 units had been at Mingorod on the night of 21-22 June, 1944; their ranks included shuttle veterans. The 13th Bombardment Wing force lifted off on 6 August, 1944, destined for

Rahmel, Poland (just outside of Gdynia). (Figure 26) The bombers endeavored to attack the Kanneberg Focke-Wulf aircraft frame assembly plant. (Map 16) Luftwaffe opposition was minimal, and only one B-17 was forced to crash-land in Russia.

The bombload for Rahmel had comprised only six 500 pound high explosive munitions in each plane. The Focke-Wulf installation had been hit once before in April, 1944. Bombs of 500 pound size were too light for effective damage on an aircraft factory. Though no specific information remains on the 6 August bombing results, United States Strategic Bombing Survey records pointed out that airframe attacks produced immediate drops in German production by erasing everything "on the line" that day. However, in almost every case, it was quite easy to restore the production line. The 13th Wing rated the bombing "excellent," though the use of the light bombs and lack of heavy incendiaries rendered the damage transitory. In the opinion of Albert Speer (German Economic Minister, 1944-45), attacks on final assembly plants like Rahmel were easily remedied once debris was cleaned off the impervious machine tools.⁴³ Despite decent bombing accuracy, poor choice of target and munitions hampered effectiveness on 6 August, 1944.

The FRANTIC V force was in the air again on 7 August. In Trzebinia, Poland, the Malopolska/Kontinentale Oel Crude oil refinery produced 22,500 tons per month. Eastern Command counted Trzebinia as a "priority one" target. Though one gunner died on the mission, no planes were lost. (Figure 27) (Map 17) United States Strategic Bombing Survey records indicated that the light bombs (250 pound type) probably did minimal damage to the refinery, despite another fine bombing effort, also adjudged "excellent." The raid caused an

Figure 26

Mission : FRANTIC V

Air Force : 8th Air Force

Dates of Operation : 6 August 1944

Task Force Units : 95th Bombardment Group
390th Bombardment Group
357th Fighter Group

Mission Commander : Not Recorded

Target Attacked :
6 Aug 44: Rahmel airframe factory, Poland

Planned Bombloads :
6 Aug 44: Rahmel: 3000 lbs.
6 x 500 lb.

Bombs Dropped :
6 Aug 44: Rahmel - 468 x 500 lb. possible
446 x 500 lb. dropped (111.5 tons)

Unit Assessment of Bombing :
6 Aug 44: Rahmel - Excellent

Effective on Target (direct hits) :
6 Aug 44: Rahmel - 31 x 500 lb. (7.8 tons)*

Losses :
6 Aug 44: Rahmel - Launched: 78 B-17, 64 P-51
Aborted: 2 B-17
Attacked: 76 B-17, 64 P-51
Landed : 75 B-17, 64 P-51
Down in USSR: 1 B-17
Crew Losses: 1 WIA

Claimed German Aircraft Losses : 0-4-4
(Destroyed - Probable - Damaged)

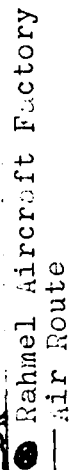
*Estimate based on U.S. Strategic Bombing Survey statistics. See Appendix Six.

SOURCE: "Fourth and Fifth FRANTIC Missions," 10 August, 1944, USAF Historical Research Center, Record 522.161-5, Maxwell AFB, Alabama; Robert L. Walsh, "Eastern Command Fact Book" in Glenn B. Infield, The Poltava Affair (New York: Macmillan and Co., Inc., 1973) , pp. 242-247.

DATE

ENGLAND to RUSSIA

Target: Rahmel
—— Front Line



FRANTIC V

SOURCE: R. R. Palmer, Editor, Historical Atlas of the World (Chicago: Rand McNally and Co., 1964), pg. 36.

Figure 27

Mission : FRANTIC V

Air Force : 8th Air Force

Dates of Operation : 7 August 1944

Task Force Units : 95th Bombardment Group
390th Bombardment Group
357th Fighter Group

Mission Commander :

Target Attacked :

7 Aug 44: Trzebinia oil refineries, Poland

Planned Bombloads :

7 Aug 44: Trzebinia: 4000 lbs.
16 x 250 lb.

Bombs Dropped :

7 Aug 44: Trzebinia - 912 x 250 lb. possible
828 x 250 lb. dropped (103.5 tons)

Unit Assessment of Bombing :

7 Aug 44: Trzebinia - Excellent

Effective on Target (direct hits) :

7 Aug 44: Trzebinia - 107 x 250 lb. (13.4 tons)*

Losses :

7 Aug 44: Trzebinia - Launched: 57 B-17, 39 P-51
Aborted: 2 B-17, 10 P-51
Attacked: 55 B-17, 29 P-51
Landed: 57 B-17, 39 P-51
Crew Losses: 1 KIA

Claimed German Aircraft Losses : 4-0-0

(Destroyed - Probable - Damaged)

*Estimate based on U.S. Strategic Bombing Survey statistics. See Appendix Six.

SOURCE: "Fourth and Fifth FRANTIC Missions," 10 August, 1944, USAF Historical Research Center, Record 522.161-5, Maxwell AFB, Alabama; Robert L. Walsh, "Eastern Command Fact Book" in Glenn B. Infield, The Poltava Affair (New York: Macmillan and Co., Inc., 1973) , pp. 242-247.

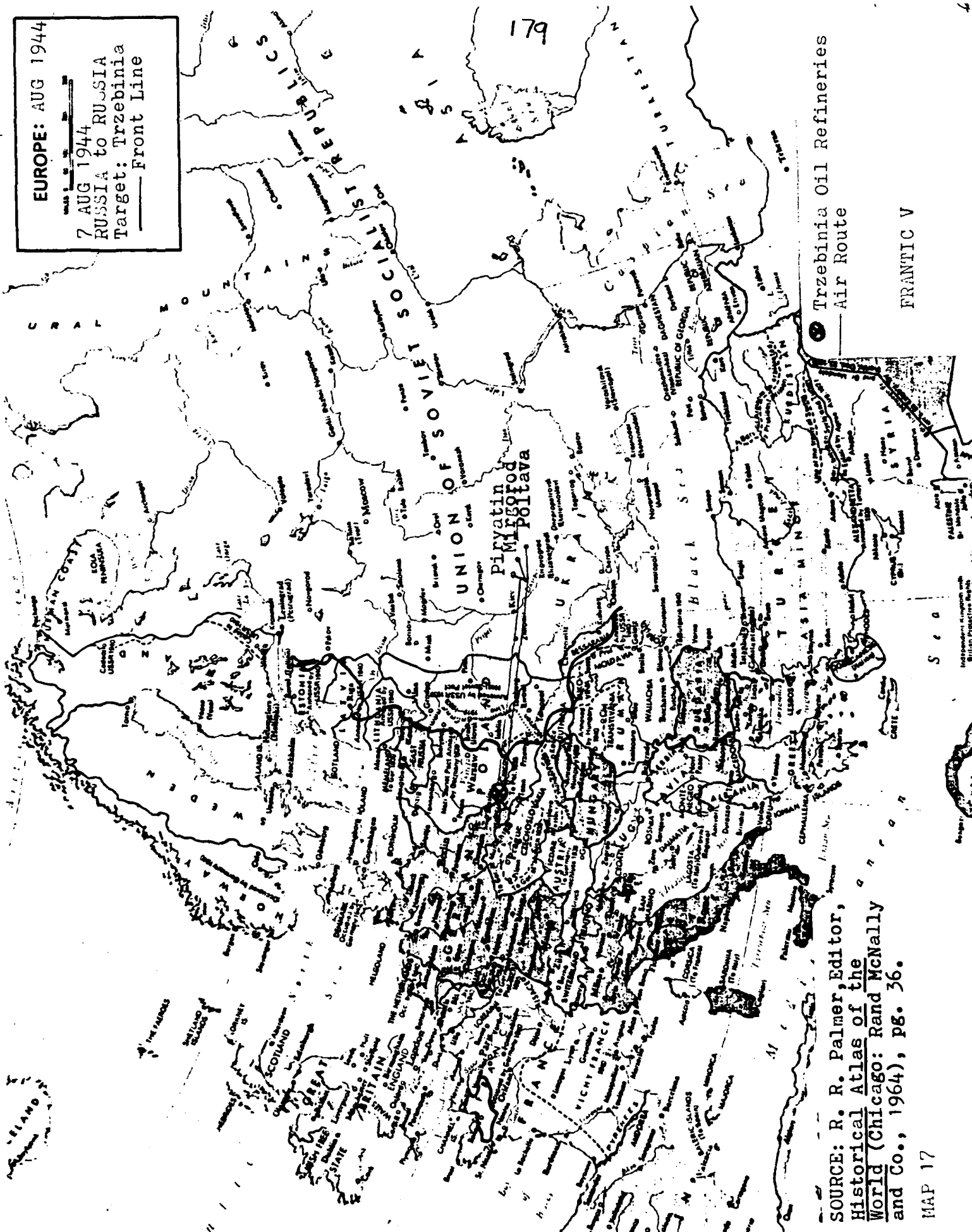
EUROPE: AUG 1944

7 AUG 1944

RUSSIA to RUSSIA

Target: Trzebinia

Front Line



Trzebinia Oil Refineries
— Air Route

FRANTIC V

SOURCE: R. R. Palmer, Editor,
Historical Atlas of the
World (Chicago: Rand McNally
and Co., 1964), pg. 36.

MAP 17

estimated loss of about 8% of monthly production (1800 tons).⁴⁴

FRANTIC V concluded on 8 August, 1944. Though the targets were the familiar Buzau and Zilistea airfields (scene of FRANTIC III and FRANTIC IV operations), a new wrinkle was added. Soviet VVS FAB 250 kilogram (550 pound) aircraft munitions were used for the first time. The big bombs had been at Eastern Command since 20 May, 1944, though proper ballistics tables were not completed until after July, 1944 tests at Aberdeen Proving Ground, Maryland. The AAF crewmen noticed that the bombs they received were much more highly machined and polished than the rough items normally furnished to the Soviet Air Force, suggesting special care. One hundred thirty six of the FABs were loaded.

The 13th Bombardment Wing struck both airdromes in force on 8 August, 1944. (Figure 28) (Map 18) The bombing effects at Buzau were not recorded beyond initial bombsight data that showed "Good" results. Photographs of Zilistea taken after the strike revealed a more dismal picture, with only two enemy planes destroyed and a field full of more than sixty active aircraft. One P-51 exploded over the target. The shuttle force returned to Italy, staging from there to England at a later date.⁴⁵

FRANTIC V certainly counted as an unqualified success. (Figure 29) At a small cost, the 13th Bombardment Wing had inflicted damage on one important oil facility and an important, albeit recoverable, airframe factory. There were no German raids, probably because the Soviet Army front lines lay over three hundred and fifty miles distant at their closest points, outside of the Luftwaffe attack radius.⁴⁶

Figure 28

Mission : FRANTIC V

Air Force : 8th Air Force

Dates of Operation : 8 August 1944

Task Force Units : 95th Bombardment Group
390th Bombardment Group
357th Fighter group

Targets Attacked :

8 Aug 44: Buzau/Zilistea airbases, Rumania

Planned Bombloads :

8 Aug 44: Buzau/Zilistea: 4000 lbs. (55 airplanes)
16 x 250 lbs.
3850 lbs. (20 airplanes)
7 x 550 lbs.

Bombs Dropped :

8 Aug 44: Buzau/Zilistea - 880 x 250 lb. possible
803 x 250 lb. dropped (100.4 tons)
526 x 250 lb. Buzau (65.8 tons)
424 x 250 lb. Zilistea (53 tons)
136 x 550 lb. Zilistea (37.4 tons)

Unit Assessment of Bombing :

8 Aug 44: Buzau/Zilistea - Good

Effective on Target (direct hits) :

8 Aug 44: Buzau - 15 x 250 lb. (1.9 tons)**
8 Aug 44: Zilistea - 14 x 250 lb. (1.8 tons)
5 x 550 lb. (1.4 tons)

Losses :

8 Aug 44: Buzau area - Launched: 75 B-17, 67 P-51*
Aborted: 12 P-51
Attacked: 75 B-17, 55 P-51
Landed: 76 B-17, 54 P-51
Lost (Air): 1 P-51
Crew Losses: 1 MIA

Claimed German Aircraft Losses : 1-0-0

(Destroyed - Probable - Damaged)

*Included 3 P-51s left by previous FRANTIC operations.

** Estimate for Buzau based on U.S. Strategic Bombing Survey statistics.
See Appendix Six.

SOURCE: "History of the Armament-Automotive Section in Eastern Command," 1944, USAF Historical Research Center, Record 522.01-1, Maxwell AFB, Alabama; "Photographic Interpretation Report No. G53, Romania Aerodrome Gilistea(sic)," 1944, USAF Historical Research Center, Record 622.430-6, Maxwell AFB, Alabama; Major General Robert L. Walsh, "Message to Spaatz," 7 August, 1944, USAF

Historical Research Center, Record 622.430-6, Maxwell AFB, Alabama; Robert L. Walsh, "Eastern Command Fact Book" in Glenn B. Infield, The Poltava Affair (New York: Macmillan and Co., Inc., 1973) , pp. 242-247.

EUROPE: AUG 1944

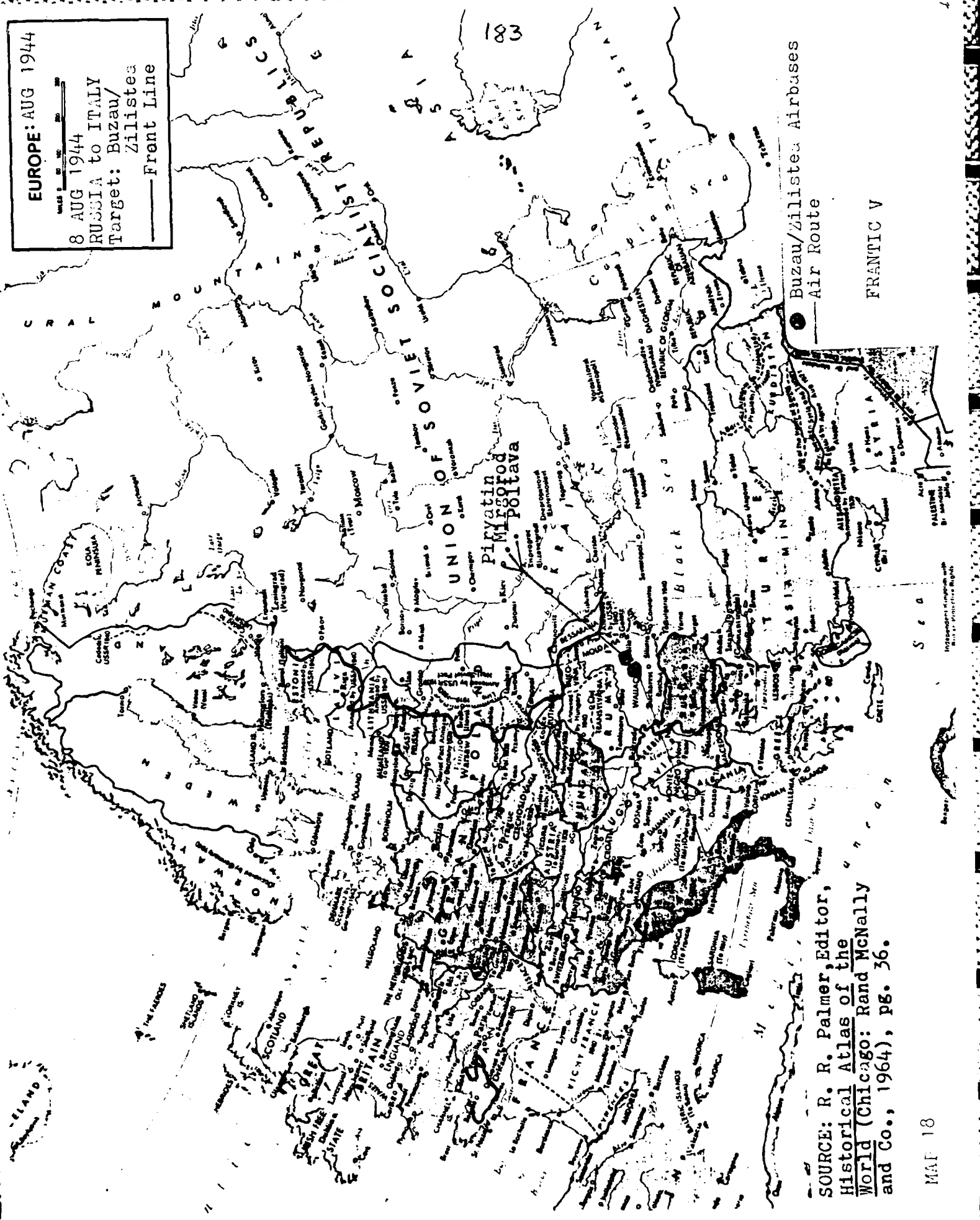
8 AUG 1944

RUSSIA to ITALY

Target: Buzau/

Zilistea

—Front Line



Buzau/Zilistea Airbases
—Air Route

FRANTIC V

SOURCE: R. R. Palmer, Editor,
Historical Atlas of the
World (Chicago: Rand McNally
and Co., 1964), pg. 36.

Figure 29

Mission : FRANTIC V

Air Force : 8th Air Force

Dates of Operation : 6 August through 8 August 1944

Task Force Units : 95th Bombardment Group
390th Bombardment Group
357th Fighter Group

Mission Commander : Not Recorded

Targets Attacked/Effective Bomb Tonnage :

6 Aug 44: Rahmel aircraft factory, Poland/ 7.8 tons
7 Aug 44: Trzebinia oil refineries, Poland/ 13.4 tons
8 Aug 44: Buzau airbase, Rumania/ 1.9 tons
Zilistea airbase, Rumania/ 3.2 tons

Mission Totals : Aircraft Launched: 78 B-17, 64 P-51
 Aborted to England: 2 B-17
 Aircraft returned: 75 B-17, 54 P-51
 Aircraft lost: 1 B-17, 1 P-51
 Aircraft left for repair: 9 P-51
 Crew losses: 1 KIA, 1 MIA, 1 WIA

Claimed German Aircraft Losses : 5-4-4
(Destroyed - Probable - Damaged)

SOURCE: Robert L. Walsh, "Eastern Command Fact Book" in Glenn B. Infield, The Poltava Affair (New York: Macmillan and Co., Inc., 1973) , pp. 242-247.

The Status of Eastern Command

With the deadline for Soviet approval or disapproval of FRANTIC expansion set for 14 August, 1944, General Spaatz dispatched his reliable trouble-shooter, Major General Hugh J. Knerr, to consider the situation at the Poltava air complex. Knerr had been an early advocate of the large-scale, Maximum Effort plan. As Knerr flew to Poltava, he stopped to see General Eaker at Caserta, Italy. The travelling troubleshooter informed Eaker that he was already convinced that the Poltava area was not viable, nor was the combined Murmansk/Persian Gulf supply system. Knerr leaned heavily toward the Maximum Effort buildup near Vinnitsa, west of the Dnepr River, and was also inclined to pressure neutral Turkey for a Black Sea supply route. Knerr arrived in the Ukraine on 15 August, 1944.⁴⁷

What awaited Knerr at Poltava? Captain Sperling on the FRANTIC III mission had already seen a part of it when he noticed that the Eastern Command personnel had been very bored between missions and had experienced feelings of purposelessness. It was one thing to direct maintenance of an installation for "precedent" purposes; it was quite another to live and work in a foreign country for no apparent reason.

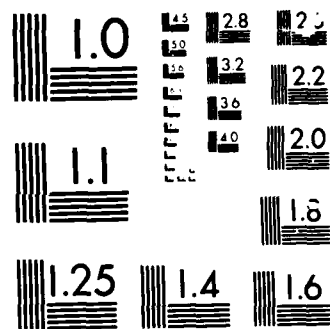
A 15th Air Force intelligence officer, Lieutenant Colonel L.H. Neveleff, visited Eastern Command just ahead of Knerr. His report on the vital intelligence work (as observed, a key part in strategic bombing) at Poltava and the two other fields depicted a confused, poorly-run situation. Neveleff observed that there was one U.S. major and a part-time UWS photo-interpreter on hand in the photo-intelligence section (the same one that thought FRANTIC JOE bombed and destroyed a refinery). The American photo-intelligence

RELUCTANT ALLIES: THE UNITED STATES ARMY AIR FORCE AND
THE SOVIET VOENNO VOZDUSHNIE SILY 1941-1945(U) CHICAGO
UNIV IL D P BOLGER JAN 85

RELUCTANT ALLIES: THE UNITED STATES ARMY AIR FORCE AND
THE SOVIET VOENNO VOZDUSHNIE SILY 1941-1945(U) CHICAGO
UNIV IL D P BOLGER JAN 85

F/G 15/7

NL



effort showed "no overall plan." Recon flights seemed "aimless," with an AAF/VVS duplication of effort over Eastern Rumania. Neveleff considered that "no great contribution," considering American craft had operated over Rumania for some time (since the June, 1942 HALPRO raid to be exact). No attempt had been made to develop information about East Prussia and northern Poland, and there seemed an "absence of specific information" on where and what to look at in the north. The officer at Poltava blamed bad weather and Russian intransigence, though he had no idea of what he wanted to look for if he had permission. (Neveleff could not establish how many times, if at all, the major had asked to fly over the northern area.) When the inspector flew to Moscow, he found Deane's intelligence assistants "both equally at sea," with no knowledge of intelligence matters. The visitor detected an "air of futility." Colonel Neveleff ruled the Eastern Command intelligence effort as "lacking authority, respect, and definite orientation."

Neveleff did not confine his comments to intelligence matters. He remarked that Lieutenant Colonel Irish (Base 561 commander, Mingorod), had "no apparent principles of primary principles" of air war planning "other than flying." But Neveleff provided the most damning evidence on the growing malaise at Eastern Command when he talked to Colonel Paul T. Cullen, deputy commander and chief of operations to newly-promoted Brigadier General Kessler. Cullen had been in the USSR since the Griffith survey in February, 1944, and he had axes to grind. Cullen told Neveleff that the Military Mission in Moscow had "failed to gauge the Russian reaction" properly, and that Deane's office did not appreciate the value of intelligence. Cullen wrapped up his views with a skewed view of FRANTIC: "USSTAF doctrine holds that the shuttle

operations are uneconomic and that the only justification for the operations is the bringing together of the two forces in the hopes they will learn to work together." (Cullen, who had been in on the project from the outset, had full knowledge of the actual FRANTIC objectives.) Neveleff attached a draft of procedures he created for the hapless Eastern Command Intelligence Section, and made his own conclusion that the present bases were not of further economic value.⁴⁸

Cullen's attitude pervaded the command. The slapdash, sometimes unskilled conglomerate of soldiers assembled for Eastern Command suffered a marked skid in morale. A special report on morale problems over the summer of 1944 (completed by Eastern Command investigators on 5 October) pointed out that "purposeless idleness" after FRANTIC II constituted the primary reason for low motivation. The troops knew that their duties were not important, and frustration was a very real feeling among them. Lack of unit organization, resulting in confusion and countermanded orders, also played a part. Pay problems, rudimentary facilities (by AAF standards), friction with the local populace (especially at Poltava), and insistence on seven days a week of work without anything to do compounded the problem. The investigators criticized the malicious effects of "complaining discontent" among the officers that transmitted to the men.⁴⁹ Neveleff's talk with Colonel Cullen indicated the depth of the leadership's discontent.

Duty performance and attention to detail also slipped after June. On 4 August, 1944, Russian chief of staff Kovalev (referred to as a colonel by Americans and a major general by A.V. Nikitin) wrote a note to Colonel Cullen reinstating the 24 hour reconnaissance notification

rule. Apparently, only one American route/time/location report in the last few weeks (including FRANTIC III and photo flights) had been accurate. The Americans had simply ignored the flight plans, or the flight plans were in error and no corrections were made. Some forms had information omitted. Spaatz told Doolittle on 7 August, 1944 that the Russians were beginning to object to constant errors in filed American flight plans.⁵⁰

A quick look at the Eastern Command photographic reconnaissance flights between 15 August and 28 September, 1944 shows the depth of this problem of coordination. Despite "holes" in Eastern Command's target array (and the fact that VVS recon had no real interest in smokestack counting), photo corridors were requested on only thirty one of fifty three days. While the Soviets disapproved all flights from 26 August until 6 September (following several postponements of FRANTIC VI and a growing Soviet realization that shuttles were winding down), the Russians authorized twenty days' worth of aerial recon. Each time, the Soviets notified PVO gunners and interceptors of the coming aircraft. On thirteen out of twenty days, no F-5s flew. Weather accounted for but one unilateral abort. It should be recalled that Eastern command had ten or so F-5s from 15th Air Force on hand at its three bases at any given time. Colonel Cullen remarked in a cable to Eaker that daily photo missions were needed "for diplomatic reasons."⁵¹

General Knerr did not waste much time in reaching his conclusion. By 16 August, 1944, Knerr had seen enough. He recommended a maximum of five more flights, with termination of the project by 15 September. The general told Spaatz to reduce the U.S. commitment to the bare minimum and cancel all supplies enroute. Significantly, Knerr stated

that Siberian bases were "no longer essential," given the Pacific island basing situation for B-29s. However, Knerr still wanted Deane to push the maximum effort plan for bases at Vinnitsa the following spring.⁵²

The principals in the Moscow Military Mission had reached the same conclusions as General Knerr. As early as 2 August, W.Averell Harriman and General Robert L. Walsh discussed probable Soviet refusal to the U.S. expansion plans. They agreed that the Soviets were unwilling to sink more labor and materials into the project, and that Soviet pride precluded any USAAF air defenses. The two men thought that FRANTIC should contract down to Poltava and stick to a few photographic operations now and then. Harriman insisted that supply stocks enroute be shipped to Poltava for future use, presumably in the far east. In Washington, D.C., Major General John R. Deane presented essentially the same points to the air staff. He opined that Molotov had scuttled Mission 16 to date, and he recommended a drawdown to Poltava alone, with about 300 winter huts for the reduced force. Deane further stated that he wanted to stockpile supplies at Poltava for EXPLORATION (the new name for GLACIER). Finally, Deane asked General H.H. Arnold to withhold shipment of B-24 bombers to the Soviets until EXPLORATION was resolved.⁵³

The expansion plan for FRANTIC officially died on 17 August, 1944, when Molotov told Harriman that the FRANTIC bases were "seldom used" and that the UVS wanted them back for their own uses. A conference of Spaatz, Eaker, and Walsh at Caserta from 26-28 August closed the issue of Eastern Command. Winter shuttles were determined to be "impracticable"(sic), though that was a supposed advantage of Soviet bases the year before. With France and northern Italy cleared,

there was no need to maintain the air complex in the Ukraine. General Walsh cabled General Kessler on 28 August, telling him to cancel all orders for Soviet bombs and notify the UVS that the base would be reduced to a three hundred man cadre (the Americans intended to actually leave only two hundred). As for EXPLORATION, Kessler was told that Pacific successes "may eliminate" the need for that exercise, so Eastern Command had no stockpile requirement. Thus, Harriman and Deane were overruled. USSTAF had given up on further Soviet bases--sort of.⁵⁴

General Henry H. Arnold threw a monkey wrench into the Pacific plans on 8 August, 1944. Arnold hastily assured visiting Lieutenant General Leonid G. Rudenko that the AAF could send fifty B-24s a month to the Soviets, commencing immediately. Arnold offered to send the planes through the Persian Gulf immediately. General Deane, in Washington at the time, convinced General Arnold to call Rudenko back and tell the Russian that no B-24s could be delivered until the Soviets concurred in EXPLORATION, and that the big bombers would only be delivered from Alaska to Siberia.⁵⁵

Meanwhile, on 20 August, 1944 Harriman asked Stalin through Molotov to begin the Pacific project. Stalin wrote back vaguely to President Roosevelt on 22 August, 1944, stating that the "time is not far off" to get to such questions. The "time" receded considerably after further wrangling over the B-24 delivery resulted in an angry Russian "nyet" to the bomber project on 29 September, 1944. That same day, the USSR Embassy in Washington delivered a scathing letter of protest to the Secretary of State. The Soviets were incensed over American B-29 incursions over the Kamchatka Peninsula, and rudely accused the AAF of inability to control its aircrews. EXPLORATION

languished throughout the winter, dying a slow death of neglect at Soviet hands despite occasional efforts by Deane and Harriman. Strategically, the Americans passed beyond any feasible need for Siberian bases on 24 November, 1944. That day, the first B-29s left the Marianas Islands to attack Japan.⁵⁶

Though GLACIER/EXPLORATION was essentially finished by Knerr's report and the Caserta meeting in August, the Vinnitsa option for permanent basing was still somewhat alive. General Spaatz, who had so favored the strategic possibilities of basing in the Ukraine, considered those bases too far to the east by the fall of 1944 (as if Germany had moved in the interim). The relative security from the Luftwaffe was not worth the long flights to get to the Poltava air complex across the shrinking Reich. Molotov's August comments shelved any USSTAF interest, but by 15 November, Spaatz had directed the 15th Air Force to consider basing in the Budapest region, with resupply through the Black Sea (th Turks were still not consulted). General Deane explained that the Budapest plan was not of any political value, but dutifully tried to press the case after 29 November, 1944, with General Arnold's approval and General Spaatz' insistence. Grandiose schemes talked of two to three hundred shuttle sorties per month, and Spaatz graciously agreed to hit targets for the Soviets if they approved. President Roosevelt secured Josef Stalin's assent on 12 February, 1945 at Yalta for a base at Viena and one at Budapest. But General Deane found the UVS very unsympathetic to the plan, which Deane thought had been forced on them by Stalin. Lieutenant General Ira Eaker even conducted a brief survey from 10 through 14 March, 1945, but the plan proved rather pointless by that time in the war. After further Soviet delays, the Joint Chiefs of Staff gave up on 19

April, 1945. They cabled Spaatz: "Abandon all efforts to introduce United States personnel into the USSR."⁵⁷

The Soviet side of this argument remained a matter of informed speculation at best. Nikitin summarized the basic Russian line with a taciturn "poteryala smysl" (it had lost reason).⁵⁸ One must consider the Soviet point of view, especially in light of the likelihood that the NKVD dutifully intercepted U.S. cable traffic on a routine basis. (The first Russian disapproval of photo flights in August neatly coincided with Walsh's message to Kessler from Caserta on 26 August, 1944.) Three pictures presented themselves. First, Eastern Command probably seemed inefficient to the Soviet military people; there was so little combat flying going on, and the occasional FRANTIC task forces seemed so hamstrung by weather that the rawest UVS pilot had learned to fly under. Second, the Americans did not know what they wanted next. The three-tier American plan (FRANTIC, Revised Plan, Vinnitsa/Maximum Effort) looked like an imposition of the old VELVET plan. As Walsh and Harriman observed, the Soviets could not justify shipping more resources in U.S. bases, especially in light of the few American fighting missions. Finally, and probably by sheer coincidence, the Vinnitsa plan in August might have appeared as a subterfuge to intervene in Poland. With the uprising of patriots in Warsaw on 1 August, 1944, political differences among the Allies came out in the open.⁵⁹ Though FRANTIC was already on the way to dissolution, its last active days got tied up in the sour, bloody business in Warsaw.

Missions Six and Seven

Lieutenant General Tadeuz Bor-Kommandorski led the uprising in Warsaw, Poland as Soviet armor units closed on the Polish capital. The debate over the causes and courses of the Warsaw rising remains a controversial subject beyond the scope of this study. Suffice it to say that Bor-Kommandorski desperately needed supplies and external support to stave off the vigorous German reaction to the revolt. The Royal Air Force began dropping sustenance on 4 August, following it with drops on 11, 12, and 13 August as well. The Soviets, incrutable as ever, merely called the rebellion "reckless adventurism" and refused to intervene.⁶⁰

In England, the 8th Air Force had been scheduled for FRANTIC VI since 30 July, 1944, since the 15th would be busy supporting the southern France invasion. The original timetable put FRANTIC VI on the calendar after 26 August, 1944. On 10 August, Doolittle got word that FRANTIC VI would be delayed "greater than previously anticipated." On 15 August, even as General Knerr composed the report that curtailed Eastern Command, the American ambassador asked for Soviet permission to use FRANTIC VI to drop supplies to the Polish resistance fighters. The Soviets refused. FRANTIC VI was on and off again until 20 August, 1944, when it was postponed once again. The weather had intervened. Major General Perminov asked Brigadier General Kessler to bomb the railyards at Galati on 22 August, 1944, then cancelled the request and FRANTIC VI on 23 August, 1944. Perminov cited the continuing Soviet advance in the Balkans.

From 26 August until 6 September, the VVS denied all photo missions requested at Poltava. This period coincided with the Caserta

conference and its aftermath; the Soviets officially found out on 1 September, 1944 that the shuttle raids were due to end by 30 September. By 4 September, FRANTIC VI had new targets outside Warsaw. By 7 September, USAAF recon planes had clearance to fly once more.⁶¹

FRANTIC VI flew on 11 September, 1944. The former victims of the Luftwaffe raid on Poltava, the 45th Bombardment Wing's 96th and 452nd Bombardment Groups, participated. The task force attacked what they thought was a minor motor transport factory in Chemnitz, Germany: the Wanderwerke A.G. mill. U.S. bombloads included the 500 pound incendiary bombs along with the standard 500 pound high explosives. This was the only time the Wanderwerke mill was struck during the war. (Figure 30) (Map 19)

The bombing was among the poorest on any FRANTIC mission, with a mere twenty one high explosive bombs striking the plant. The main pattern hit well south of the installation. The groups rated their efforts "fair," and listed only a single fighter lost. It seemed a routine mission.

It took until after the war to determine the real facts about 11 September in Chemnitz. This raid offered the only example of detailed investigation of a FRANTIC mission by the United States Strategic Bombing Survey. The USSBS discovered the real intelligence on the facility. In fact, the Wanderwerke mill had been leased by the Auto Union A.G., Siegman Division, which in September, 1944 produced all "Panther" and "Tiger" engines for the German Heer. The Chemnitz attack, far from being ineffective, destroyed seventy six percent of the factory outright, burned up all the machine tools, and set back tank engine production for six months. Only simultaneous damage to tank

Figure 30

Mission : FRANTIC VI

Air Force : 8th Air Force

Dates of Operation : 11 September 1944

Task Force Units : 96th Bombardment Group
452nd Bombardment Group
20th Fighter Group

Mission Commander : Not recorded

Target Attacked :
11 Sep 44: Chemnitz armaments plant, Germany

Planned Bombloads :
11 Sep 44: Chemnitz: 5000 lbs.
10 x 500 lb. (51 aircraft)
10 x 500 lb. incen. (24 aircraft)

Bombs Dropped :
11 Sep 44: Chemnitz - 510 x 500 lb. possible
467 x 500 lb. dropped (116.8 tons)
248 x 500 lb. incen. possible
237 x 500 lb. incen. dropped (59.3 tons)

Unit Assessment of Bombing :
11 Sep 44: Chemnitz - Fair

Effective on Target (direct hits) :
11 Sep 44: Chemnitz - 22 x 500 lb. (5.5 tons);
Incendiaries very effective

Losses :
11 Sep 44: Chemnitz - Launched: 75 B-17, 64 P-51
Aborted: none
Attacked: 75 B-17, 64 P-51
Landed : 74 B-17, 61 P-51
Lost (air): 1 P-51
Down in USSR: 1 B-17, 2 P-51
Crew Losses: 1 MIA

Claimed German Aircraft Losses : 0-0-0
(Destroyed - Probable - Damaged)

SOURCE: Robert L. Walsh, "Eastern Command Fact Book" in Glenn B. Infield, The Poltava Affair (New York: Macmillan and Co., Inc., 1973), pp. 242-247; United States Strategic Bombing Survey, Ordnance Industry Report, Munitions Division, Auto Union A.G. Chemnitz and Zwickau (Washington, D.C.: United States Government Printing Office, 1947), pg. 15.

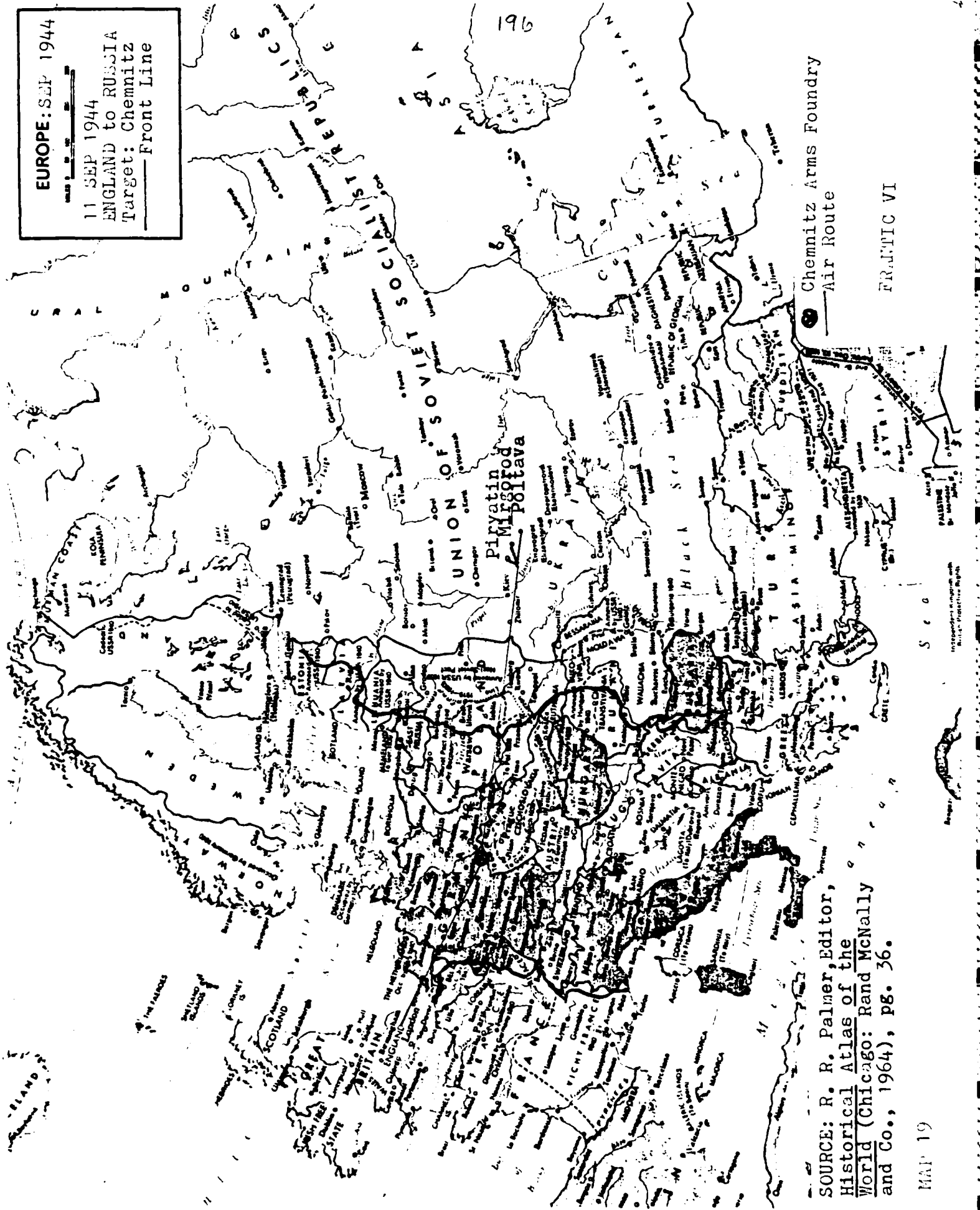
EUROPE: SEP 1944

11 SEP 1944

ENGLAND to RUSSIA

Target: Chemnitz

Front Line



SOURCE: R. R. Palmer, Editor,
Historical Atlas of the
World (Chicago: Rand McNally
and Co., 1964), pg. 36.

body shops in other towns (by other raids) prevented a more serious effect, since it slowed tank production throughout the Reich. The true destroyers were the big fire bombs in this most successful of all FRANTIC missions.⁶²

As for the return raid on 13 September, 1944, only the barest sortie records survive. One P-51 that had been stranded at Poltava returned with the task force as it flew to Italy. (Figure 31) (Map 20) There were no losses, and the bombing at the Diosgyon, Hungary armament works was not evaluated. Overall, FRANTIC VI was a routine mission with minimal losses that had gotten extremely lucky at Chemnitz. (Figure 32) ⁶³

Meanwhile, for reasons known but to Josef Stalin, the Soviets had elected to do something concrete for General Bor-Kommandorski in Warsaw. They dropped a few supplies on 13 and 15 September, 1944, but the inexperienced VVS riggers did not pack the items well. Some had no parachutes, and all were damaged on landing. FRANTIC VII was set for a 15 September mission that had to turn back on account of the weather. The clouds and rain stalled mission seven until the 18th of September, 1944.

FRANTIC VII, like FRANTIC V and VI, consisted of shuttle veterans. The three groups of the 13th Bombardment Wing had all been to the Ukraine previously, with the 95th and 390th Groups on their third trip to Poltava and Mirgorod. The flight was the biggest since the ill-fated FRANTIC II, with over one hundred B-17s droning over Warsaw. (Figure 33) (Map 21) Unfortunately, the Flying Fortresses had little luck with their supply drop. Most of the containers (70% or more) fell far short of the shrinking partisan centers of resistance, pulled off by high winds. To add to Bor-Kommandorski's troubles,

Figure 31

Mission : FRANTIC VI

Air Force : 8th Air Force

Dates of Operation : 13 September 1944

Task Force Units : 96th Bombardment Group
452nd Bombardment Group
20th Fighter Group

Mission Commander : Not recorded

Targets Attacked :

13 Sep 44: Diosgyor armaments plant, Hungary

Planned Bombloads :

13 Sep 44: Diosgyor: 4000 lbs.
16 x 250 lb.

Bombs Dropped :

13 Sep 44: Diosgyor - 1184 x 250 lb. possible
1168 x 250 lb. dropped (146 tons)

Unit Assessment of Bombing :

13 Sep 44: Diosgyor - No record

Effective on Target (direct hits) :

13 Sep 44: Diosgyor - 47 x 250 lb. (5.9 tons)

Losses :

13 Sep 44: Diosgyor - Launched: 74 B-17, 62 P-51*
Aborted: 1 B-17 **
Attacked: 74 B-17, 62 P-51
Landed: 74 B-17, 62 P-51

Claimed German Aircraft Losses : 0-0-0 destroyed
(Destroyed - Probable - Damaged)

*Included 1 P-51 left by previous FRANTIC operations.

** This bomber dropped its load early due to flak damage, but kept in formation.

SOURCE: "Summary of Sixth FRANTIC Mission," 13 September, 1944, USAF Historical Research Center, Record 522.161-5, Maxwell AFB, Alabama; Robert L. Walsh, "Eastern Command Fact Book" in Glenn B. Infield, The Poltava Affair (New York: Macmillan and Co., Inc., 1973), pp. 242-247.

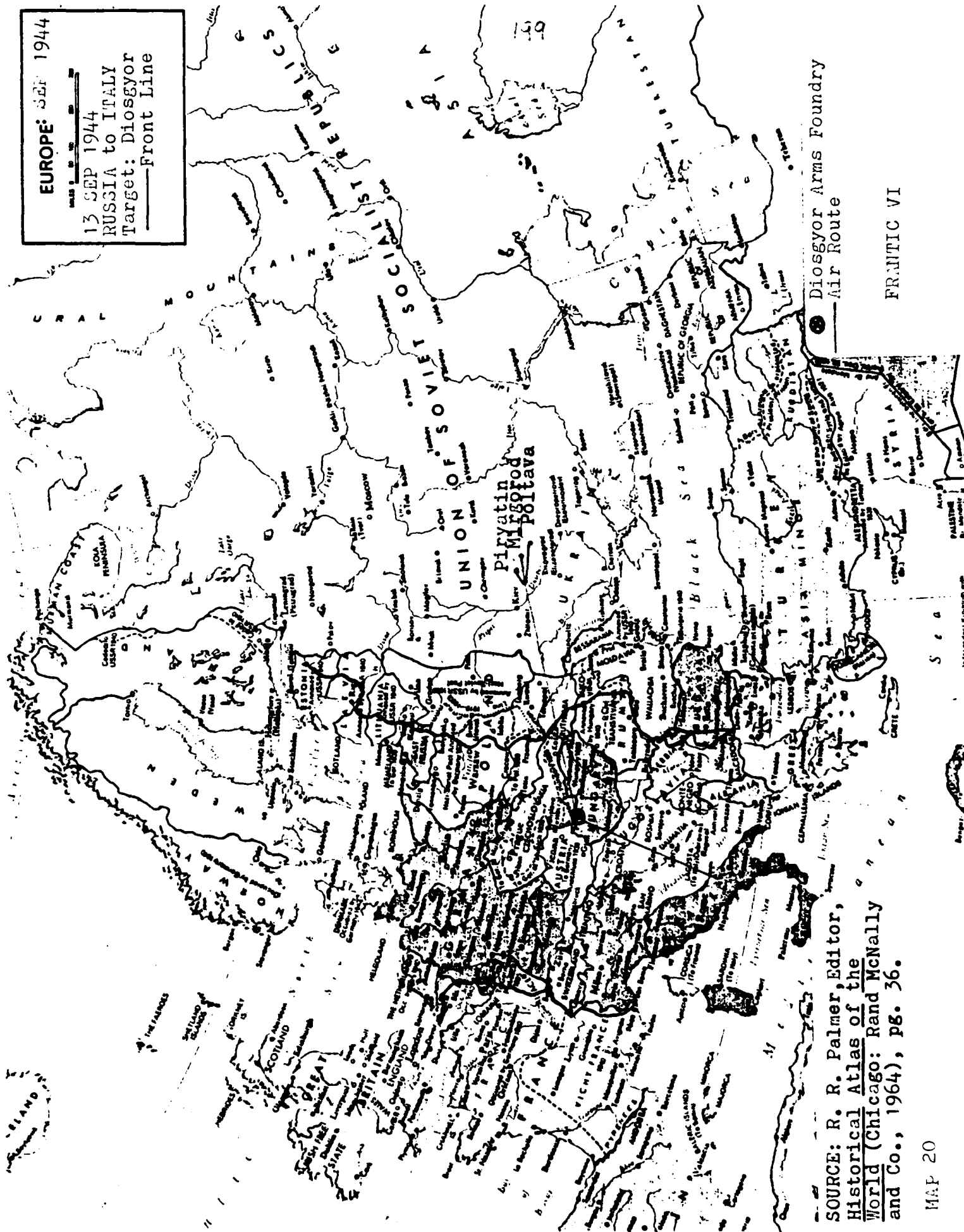
EUROPE: SEP 1944

13 SEP 1944

RUSSIA to ITALY

Target: Diosgyor

—Front Line



SOURCE: R. R. Palmer, Editor,
Historical Atlas of the
World (Chicago: Rand McNally
and Co., 1964), pg. 36.

Diosgyor Arms Foundry
—Air Route

FRONTIC VI

Figure 32

Mission : FRANTIC VI

Air Force : 8th Air Force

Dates of Operation : 11 September through 13 September 1944

Task Force Units : 96th Bombardment Group
452nd Bombardment Group
20th Fighter Group

Mission Commander : Not Recorded

Targets Attacked/ Effective Bomb Tonnage :

11 Sep 44: Chemnitz armaments plant, Germany/ (5.5 tons)**
13 Sep 44: Diosgyor armaments plant, Hungary/ (5.9 tons)

Mission Totals : Aircraft Launched: 75 B-17, 64 P-51
 Aborted to England: none
 Aircraft returned: 74 B-17, 62 P-51*
 Aircraft lost: 1 B-17, 3 P-51
 Aircraft left for repair: none
 Crew losses: 1 MIA

Claimed German Aircraft Losses : 0-0-0
(Destroyed - Probable - Damaged)

*Included 1 P-51 left by previous FRANTIC operations.

**Incendiaries very effective.

SOURCE: Robert L. Walsh, "Eastern Command Fact Book" in Glenn B. Infield,
The Poltava Affair (New York: Macmillan and Co., Inc., 1973) , pp. 242-247.

Figure 33

Mission : FRANTIC VII

Air Force : 8th Air Force

Dates of Operation : 18 September 1944

Task Force Units : 95th Bombardment Group
390th Bombardment Group
100th Bombardment Group
355th Fighter Group

Mission Commander : Not Recorded

Target :
18 Sep 44: Warsaw supply drop

Planned loads :
18 Sep 44: Warsaw: 4000 lbs. supplies

Supplies Dropped :
18 Sep 44: Warsaw - 110 x 4000 lbs. possible
107 x 4000 lbs. dropped

Unit Assessment of Supply Drop :
18 Sep 44: Warsaw - Fair

Losses :
18 Sep 44: Warsaw -
Launched: 110 B-17, 73 P-51
Aborted: 3 B-17, 2 P-51
Attacked: 107 B-17, 64 P-51*
Landed : 105 B-17, 71 P-51
Lost (air): 2 P-51
Down in USSR: 1 B-17
Unknown: 1 B-17
Crew Losses: 1 KIA, 2 WIA, 12 MIA

Claimed German Aircraft Losses : 8-1-5
(Destroyed - Probable - Damaged)

*Seven P-51s got separated in the target area but completed the flight.

SOURCE: Robert L. Walsh, "Eastern Command Fact Book" in Glenn B. Infield, The Poltava Affair (New York: Macmillan and Co., Inc., 1973) , pp. 242-247.

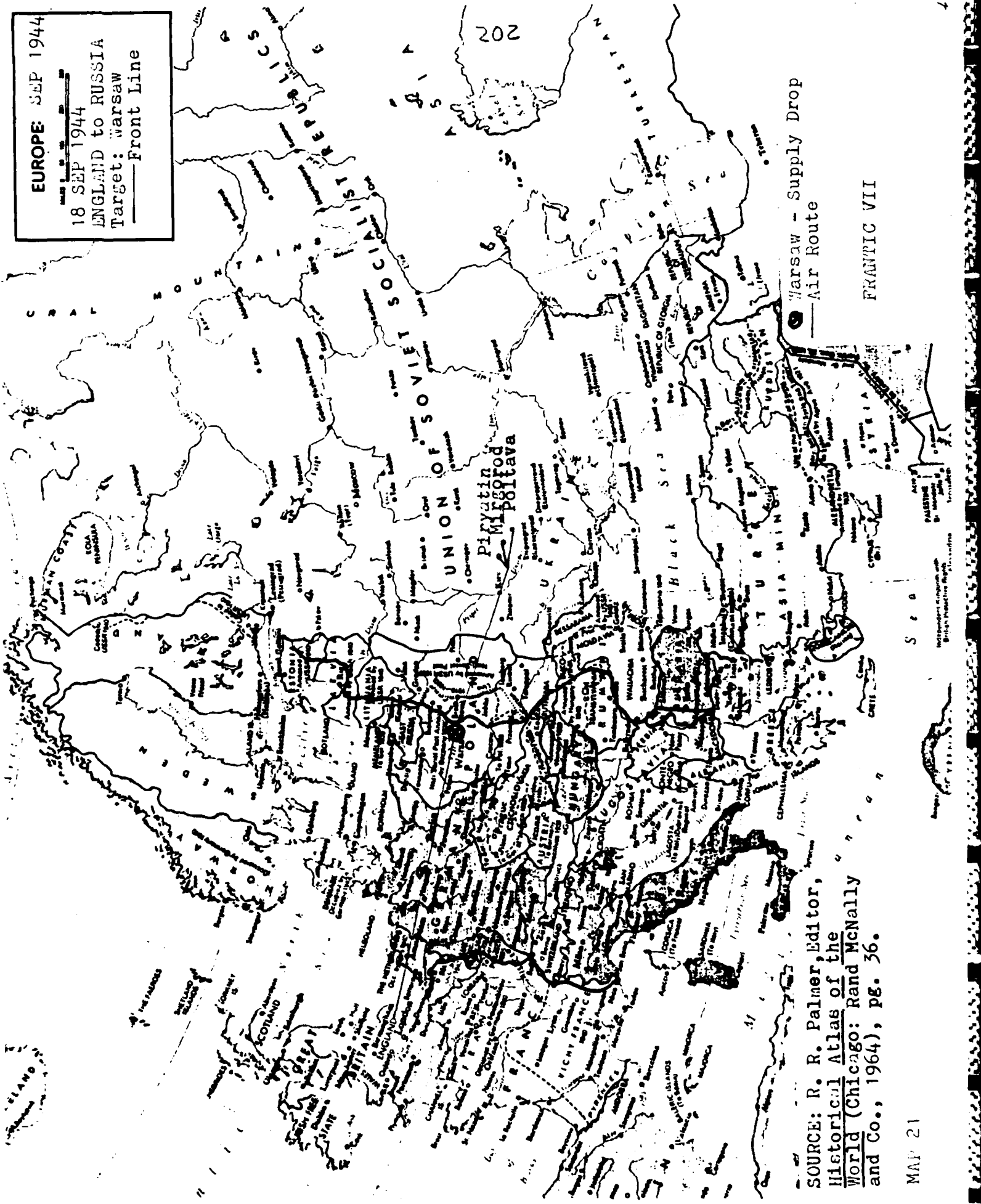
EUROPE: SEP 1944

18 SEP 1944

ENGLAND to RUSSIA

Target: Warsaw

Front Line



Warsaw - Supply Drop
Air Route

FRANTIC VII

SOURCE: R. R. Palmer, Editor,
Historical Atlas of the
World (Chicago: Rand McNally
and Co., 1964), pg. 36.

Soviet supplies dwindled after the American flight, though Russian ground units did commence a local offensive.⁶⁴

Bor-Kommandorski surrendered his ragged survivors on 2 October, 1944. Could the Americans and British have done more? Would the FRANTIC drop have mattered had it gone earlier? Three items come into consideration. First, no Soviet prohibition ruled out the use of American air transports flying from Italy; the RAF ran numerous missions in that way. Second, the American European air transport fleet was already heavily committed in August and September, 1944. In August, the lumbering C-47s had dropped a division-sized force of U.S. paratroopers in southern France. The transport service strained to supply the racing tanks of Lieutenant General George Patton's Third Army and failed. B-17s and B-24s had to be used to supplement the overstretched Air Transport Command. Air cargo units delivered 13,000 tons to the American armies in France from 19 August until 16 September, tying up the trained cargo pilots and specially-equipped cargo airframes. As if these activities were not enough, from 17 until 26 September, all Allied transport craft turned to support the massive MARKET-GARDEN parachute drops in Holland (better known as the "bridge too far" operations). Finally, the B-17s of FRANTIC VII were not designed to carry or drop parachute packages. Bomber pilots trained to fly at high altitude; transport fliers routinely delivered jumpers and goods at low altitude. The timing of FRANTIC VII probably meant little, since the big four-engine Flying Fortresses just did not make good paradrop platforms. Considering the Polish drop zones were in a city, even trained cargo units could have had a rough time making their runs in an accurate fashion. High altitude bombers unloading parachutes had only a small chance of placing their parcels on target areas due to wind shears at that height. (This was what occurred on 18

Figure 34

Mission : FRANTIC VII

Air Force : 8th Air Force

Dates of Operation : 19 September 1944

Task Force Units : 95th Bombardment Group
390th Bombardment Group
100th Bombardment Group
355th Fighter Group

Mission Commander : Not Recorded

Targets Attacked :
19 Sep 44: Szolnok rail center, Hungary

Planned Bombloads :
19 Sep 44: Szolonok: 4000 lbs.
16 x 250 lb.

Bombs Dropped :
19 Sep 44: Szolonok - 1488 x 250 lb. possible
1472 x 250 lb. dropped (184 tons)

Unit Assessment of Bombing :
19 Sep 44: Szolonok - No record

Effective on Target (direct hits) :
19 Sep 44: Szolonok - 88 x 250 lb. (11 tons)*

Losses :
19 Sep 44: Diosgyor - Launched: 93 B-17, 62 P-51
Aborted: 1 B-17**, 7 P-51
Attacked: 92 B-17, 55 P-51
Landed: 93 B-17, 55 P-51
Crew Losses: None

Claimed German Aircraft Losses : 0-0-0
(Destroyed - Probable - Damaged)

* Estimate based on U.S. Strategic Bombing Survey statistics. See Appendix Six.

** Dropped bombs early, but continued in formation.

SOURCE: "Summary of Eighth(sic) FRANTIC Mission," 19 September, 1944, USAF Historical Research Center, Record 522.161-5, Maxwell AFB, Alabama; Robert L. Walsh, "Eastern Command Fact Book" in Glenn B. Infield, The Poltava Affair (New York: Macmillan and Co., Inc., 1973) , pp. 242-247.

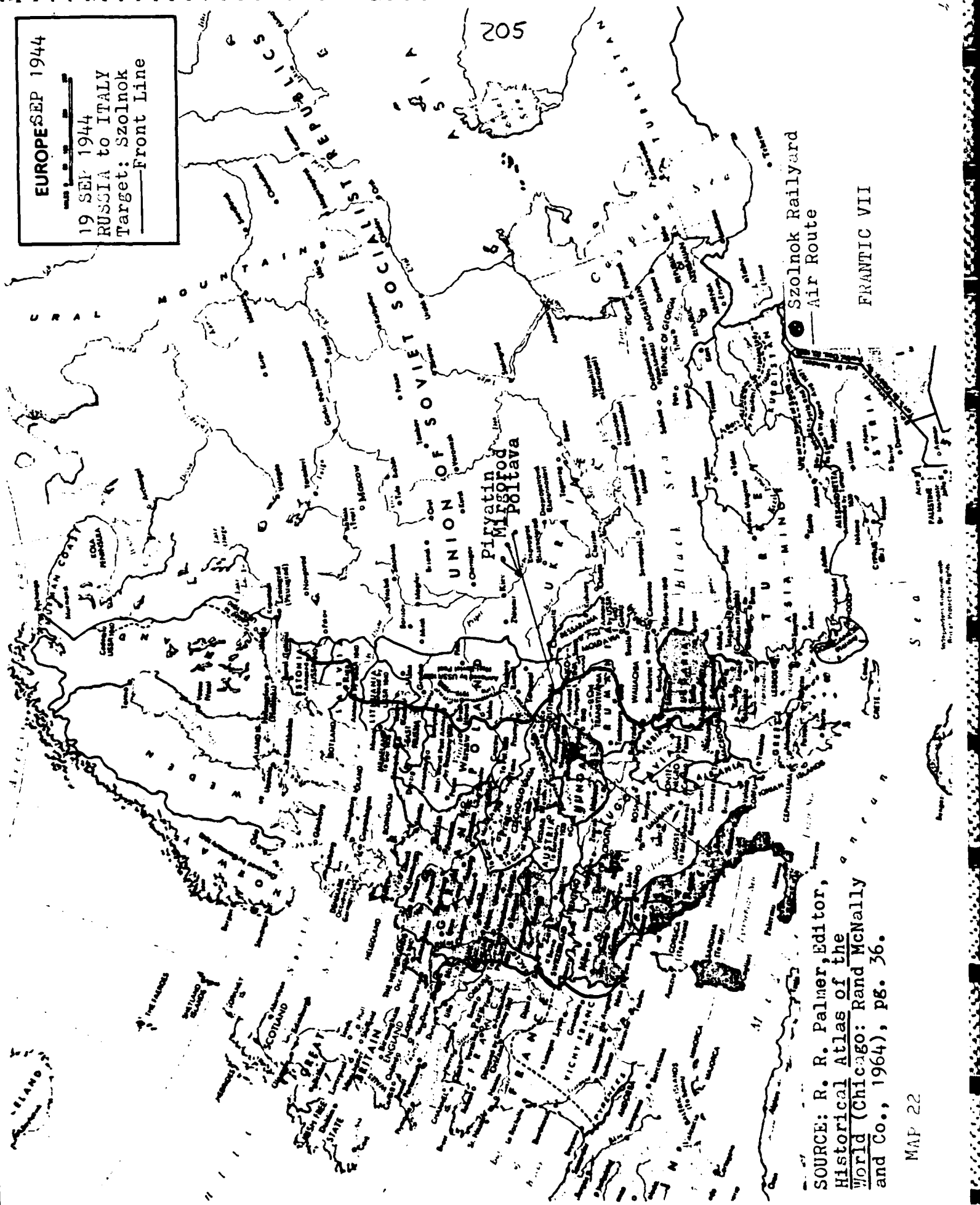
EUROPE SEP 1944

19 SEP 1944

RUSSIA to ITALY

Target: Szolnok

—Front Line



205

UNION OF SOVIET SOCIALIST REPUBLICS
Pirvatin
Mirrored
Poltava

Szolnok Railway
Air Route

FRANTIC VII

SOURCE: R. R. Palmer, Editor,
Historical Atlas of the
World (Chicago: Rand McNally
and Co., 1964), pg. 36.

MAP 22

September.) In essence, the Allied cargo planes were available to succor Bor-Kommandorski, but not unlike the more callous Soviets across the Vistula River, the western Allies had other priorities. Of course, American and British motives in the matter reflected no evidence of malice, merely a shortage of means. The Soviets could make no such claims (though they did).⁶⁵

The Warsaw supply drop had not come cheaply. FRANTIC VII's 13th Wing units left a good proportion of their numbers in the Ukraine as the force went back to England on 19 September, 1944. (Figure 19) (Map 22) The big combat wing hit the Szolonok, Hungary railyards in a raid so inconsequential it was not even mentioned in USSTAF intelligence reports. FRANTIC VII paid a heavy price for its two missions, leaving fourteen bombers and sixteen fighters behind.⁶⁶ (Figure 35)

As for the American bases, it was not long before drawdown started. Photo flights ended on 28 September, never to resume. Carl Spaatz held the withdrawal while considering a FRANTIC VIII for 2 and then 5 October. Then, on 4 October, 1944 the order came: pull out all but 200 men. The train for Iran left on 12 October, 1944.⁶⁷

Figure 35

Mission : FRANTIC VII

Air Force : 8th Air Force

Dates of Operation : 18 September through 19 September 1944

Task Force Units : 95th Bombardment Group
390th Bombardment Group
100th Bombardment Group
355th Fighter Group

Mission Commander : Not Recorded

Targets Attacked/ Effective Bomb Tonnage :

18 Sep 44: Warsaw supply drop

19 Sep 44: Szolnok rail center, Hungary/ 11 tons

Mission Totals : Aircraft Launched: 110 B-17, 73 P-51
 Aborted to England: 3 B-17, 2 P-51
 Aircraft returned: 93 B-17, 55 P-51
 Aircraft lost: 2 B-17, 2 P-51
 Aircraft left for repair: 12 B-17, 14 P-51
 Crew losses: 1 KIA, 2 WIA, 12 MIA

Claimed German Aircraft Losses : 8-1-5
(Destroyed - Probable - Damaged)

SOURCE: Robert L. Walsh, "Eastern Command Fact Book" in Glenn B. Infield, The Poltava Affair (New York: Macmillan and Co., Inc., 1973) , pp. 242-247.

Life at Eastern Command

Cooperation: 2 February - 26 June, 1944

FRANTIC did not just concern shuttle bombing and combat photography flights. A major part of the effort included the idea of cooperation with Soviet combat forces, hopefully featuring the Army Air Force on its best behavior. Lieutenant General Carl Spaatz said on 8 February, 1944 that the men of the ground and air elements sent to the USSR must endeavor "to sell" the combat capability and professional competence of the strategic bombing units.⁶⁸ The American fliers and service troops did not always live up to General Spaatz' high expectations, and their performance and discipline slipped notably as the intervals lengthened between visiting task forces. Basically, AAF/VVS relations paralleled the vigor of AAF combat operations, splitting into three periods. The first, a time of cooperation, featured taxing, purposeful labor to establish the program. The next phase, marked by tension, mirrored the fits and starts of the shuttle flights and high-level American indecision after the German raid on Poltava. Finally, the Americans and Russians settled down to a long twilight of increasingly bitter contacts after the active FRANTIC operations concluded and the bulk of the G.I.s withdrew. Given the uneven and sporadic military performance of the shuttle attempts, the Eastern Command's existence on Soviet soil became in itself a reason to persevere. Nevertheless, American soldiers picked up from average aviation service units hungered for a more purposeful employment than the constitution of a "precedent."

The majority of the American maintenance and administrative units

arrived in April and May, 1944, after enduring some maddening delays at the Persian Gulf Command's Teheran headquarters due to the visa wrangles. Colonel Alfred Kessler came to Poltava on 15 April, 1944, following his staff by a day. The Americans found that Major General Aleksandr Perminov and his staff officers had prepared straw tick mattresses for the Americans in the roofless command post near the Poltava airstrip. Hot meals were provided for Kessler and his subordinates. True, it was rough and crude by plush Army Air Force standards, but Kessler appreciated it anyway. The UVS people (many of them women), lived no differently. He and Perminov, while not always able to fully communicate their thoughts, were able to understand each other quite well.⁶³

As the American soldiers and supplies rolled in to the three bases, Soviet soldiers and drafted local civilians gave tremendous assistance, *whether by unloading trains on a relentless four hour schedule, digging slit trenches and antiaircraft battery positions, or laying runway plate at four times the doctrinal rate.* The AAF Quartermaster history stated that trains came in before the majority of the U.S. supply men, but sturdy Ukrainian boys and girls from the surrounding area pitched in to clear each train on the four hour timetable. The Transportation History states directly: "the Russians delivered the goods." True to their agreement, the Soviets provided food supplements, bombs, aviation fuel (from Lend-Lease stocks), shelter, and even entertainment.⁷⁰

Throughout the late spring, Colonel Kessler's soldiers were very busy, as were Major General Perminov's men and women. Both sides formed some preliminary images of each other. General Deane observed that the Soviet private soldiers thought much of the fine USAAF trucks

and equipment as it came to the railhead. Correspondent W.L. White remarked that the fine United States Army uniforms and American mess hall food made a great sensation.

What did the Americans think of their Soviet co-workers during the first few months? Colonel Kessler considered Soviet soldiers excellent. The American base commander seemed amazed by the average Russian's "extraordinary" working hours; the UVS had to adjust their meals times to accomodate the less industrious AAF men. Considerate Russian cooks even whitened the black bread staple of the Soviet soldier for American palates. Russian PVO interceptor pilots created a strong positive picture for inquiring American fliers in Eastern Command, displaying a uniform aggressiveness and competence that made the best of the limited UVS aircraft designs and Lend-Lease clunkers like the P-39. (The careless, low-flying Soviet transport pilots were another matter, however.) Kessler was well satisfied with the fine base hospitals, where Lieutenant Colonel Jackson and his USAAF medical troops (including a dozen female nurses, the only U.S. women at Eastern Command) worked side by side with UVS doctors and staff. American troops had the run of the local towns "like London" (though they were rather badly damaged by the war), and Kessler commented on the "open-hearted" townspeople.

A little bit of America grew in the Ukraine. American soldiers brought personal radios, and American mail bags carried weekly issues of "Time," "Newsweek," "New York Times Magazine," "Yank," and "Stars and Stripes." (The UVS voiced Foreign Office concerns that the Americans not spread the materials too much.) Coca-Cola even made the trip to the USSR. U.S. ground crews played baseball after duty hours, watched by curious Russians.⁷¹

The proud citizens of the Soviet Union responded in kind. Travelling musical concert groups performed for combined audiences. Male troops displayed Russian ethnic dances, and taught inquisitive young Americans the lyrics to popular folk songs. On one occasion during this "get acquainted" interval, the Russians presented a female "muscle dancer" to enthusiastic G.I. and Red Army men. The Americans responded with wolf whistles, a form of appreciation not familiar to the girl. She burst into tears, thinking it a slight on her work. General Perminov personally intervened, explaining the strange United States custom, and then the girl returned to her efforts, beaming at the barrage of AAF whistling.⁷²

American soldiers did not speak much Russian, despite an allegedly active search for Russian language speakers. Some Russian-Americans did go with the deploying echelons, but not all actually spoke Russian. Grammarians did not appear until August, 1944 (having less priority than critical stuff such as Coca Cola and baseballs). Formal courses did not get going until after then, leaving the initial members of Eastern Command with pocket phrase books and sign language to get by. The G.I.s found that their tentative interest in learning Russian was more than met by the UVS troops' eager desire to speak English. Enterprising Americans had some fun at the expense of the typically trusting Russian peasants that constituted the UVS forces. One sentry was told to salute each American officer with the ceremonial greeting "Good morning you lousy son of a b----." A Russian serving girl in the mess hall learned to point proudly to the powdered eggs and announce "the God d----- K nations again." General Deane noted that the girl in particular was quite embarrassed when she discovered what she had been uttering so happily.⁷³ While these

pranks were probably done in good faith (and one cannot doubt that the average Russian soldier also enjoyed a good joke), they preyed on a sincere, almost child-like Russian interest in the unfamiliar Americans. In a sense, a few USSAF troops repayed that concern with cynical jokes.

Even in those first days, not everything was going well, despite the rash of concerts, parties, and formal officer dinners. Russian manpower supplements for the flight maintenance program averaged under fifty percent of the requested totals (though overall, the VVS fulfilled about eighty five percent of U.S. requirements). Already hamstrung by underqualified or outright unqualified AAF repairmen, the aircraft maintenance sections suffered from the inability (or unwillingness) of the Soviets to meet the requests. Overzealous VVS plane guards occasionally refused to allow crew chiefs near their own aircraft. The original mess timings caused delays (though this problem was solved). Soviet soldiers trained on the care of B-17 bombers rotated to the usual sentry/mess hall/ labor duties from day to day, resulting in a ceaseless retraining effort slowed by the continual language troubles. Handtools disappeared at an alarming rate. Even an official Soviet history, drawing on 169th ABON records, credits the Soviet technicians with the "maintenance-repair" of only forty five aircraft, and the replacement of a mere ninety one engines. American confusion about the provision of USAAF fighter escorts resulted in a lack of trained repairmen in the USSR; fighter crew chiefs for each group flew in on the bomber shuttles, packed into the B-17s with crates of spare parts and tools. As the Eastern Command maintenance history remarked, right from the start "unusual situations" characterized the maintenance effort.⁷⁴

The American troops, as observed several times before, were the result of successive drafts of numerous units. Many saw each other for the first time in the pressured environment of Poltava, Mirogorod, and Pinyatin. They were not known to their leaders, nor were the sergeants and officers familiar with the men. They were operating under strange circumstances, quite different from England or Italy or the continental United States. Spaatz' and Arnold's chosen commander (the opinionated Colonel John Griffith) did not work out. The VVS formed a special unit, filled by picked soldiers combed from the top ranks of the technical schools. VVS Commander Marshal Novikov ordered his immediate deputy (Colonel General Nikitin) to personally supervise the project, and Nikitin selected the entire staff of the 169th ABON for their proven service records. As W.L. White remarked, "the Red Air Force combed its own personnel to send us(sic) their best."²⁵

Perminov's men and women were at their best on the grim night of the Luftwaffe raid on Poltava. Though nearly powerless to stop the Germans, the Russians spared no pains in the aftermath. Americans were pointedly protected for some time as General Perminov restored the Poltava airdrome to fighting condition by 1300 the next day. The casualties sustained by the Soviet units bear testimony to the efforts of the VVS to save the U.S. planes and recover American wounded. American surgeon Lieutenant Colonel William Jackson watched Sergeant Tubisin and First Mechanic Georgy Luckon carefully and fearlessly open a path for aid vehicles after the attack, and designated them for United States military awards. In Colonel Jackson's opinion, the Soviet pride bordered on recklessness, but it demonstrated that most of the young men and women of the 169th ABON and its tenant units had faced Luftwaffe raids before. Major General Deane's memoirs noted that

the raid should have bound the two forces together, without recriminations.⁷⁶ But given the USSTAF reluctance to send more shuttle bombers for some time (or even fighters), the Poltava raid had the opposite effect. Though most of the FRANTIC missions still lay in the future, the intangible atmosphere of the Eastern Command changed.

Tension: 27 June - 5 October, 1944

Lieutenant General Ira Eaker gave one bit of advice to Eastern Command after FRANTIC JOE, warning the G.I.s not to bother the local women. The American troops, given run of the area, ignored that sage comment and created a source of irritation that festered as Eastern Command and the 169th ABON went through their "mid-life crisis" together. Interestingly enough, similar troubles between male HAF troops and dependent Russian wives and daughters had resulted in the total restriction of the Soviet Lend-Lease pick-up station at Fairbanks, Alaska.

The local civilian girls turned out in all their finery on the first Sunday after the main body of U.S. soldiers came to the air bases. Most of the young men were gone, and the USSAF troops moved right in. At first, relations were quite good, though the peasant girls and Red Army women were often heard to say "zavtra-zavtra" (tomorrow, tomorrow) to overanxious American youths eager for more than holding hands.⁷⁷

In the long interval after FRANTIC II, things grew testier. In the first week of July, a female Russian soldier seated in Poltava with an American was kicked by a Red Army soldier after a verbal harangue. In another case, a Russian girl's parents slapped a girl for

seeing a USSAF soldier, cursing her in his presence. In the third case, Russian soldiers called a young woman walking with a G.I. a "whore" and a "German whore." (The American spoke Russian and understood the remarks.) Colonel Paul Cullen was forced to restrict the Americans to post at Poltava after duty hours on 15 July, 1944, further frustrating the bored AAF men.⁷⁸ The other stations still enjoyed freedom to visit their nearby settlements. But all VVS men were restricted to their posts. This caused friction.

A problem then arose with the exchange rate of rubles for dollars. Accustomed to getting seventeen rubles, thirty nine kopecks on the dollar, the American soldiers awoke on 6 July, 1944 to find the rate arbitrarily altered to five rubles, thirty kopecks. (The rate in Moscow was around twelve rubles per dollar at the time.) Many of the USSAF troops had debts in town that suddenly skyrocketed out of sight, and the men at Mirgorod and Pinyatin found themselves limited to base by sudden poverty and unwillingness to face their creditors. With only forty dollars a month on the average, the USSAF men faced discouraging times, aggravated by lack of meaningful training (their own officers' fault) or infrequent shuttle missions (USSTAF's decision).

With everyone essentially stuck on base (by order, as in the 169th ABON or Base 559 at Poltava, or by financial troubles), the Russians moved in to help, though their sincerity looked doubtful. There were no clubs for the common soldiers, so the VVS established restaurants. The problem there concerned high prices, such as seventeen rubles (about \$3.20) for a bottle of beer. American troops retaliated by the time-honored G.I. custom of black-marketeering, selling dollars to eager local civilians for realistic rates and even trading in American supplies. One observer saw cases of U.S. soldiers

buying "love" with consumer goods. Not surprisingly, the common American troops soon appeared at the Russian base restaurants, flushed with black market rubles. The average VVS private was left outside with nothing.⁷⁹

The frustration as combat missions dwindled and rumors of departure swept the American ranks deepened the growing xenophobia on both sides. As explained in the operational descriptions, Eastern Command grew sloppy with routine planning and administration. After 15 August, 1944 (and especially after 28 August), most men knew that the end was near. Complaints about food that had once been called "rich" became common, with special rancor for black bread (whitened though it was). Troops were upset about living under canvas, as the AAF in England and Italy lived in higher style. An active Soviet effort to discourage social contacts, especially in Poltava, was observed by visiting FRANTIC III pilots. Lieutenant General Carl Spaatz found it necessary to send a strongly worded message to Eastern Command on 3 September, 1944, reminding them that there would be no "break up" of the unit until after a few more shuttle missions. Spaatz hoped to discourage rumors of the impending departure.

Those speculations finally came to fruition in early October, 1944. Most of the Americans were ready to leave, though about 200 stayed on. Those who shipped out were formally briefed that criticism of the Soviet Union or its armed forces would be treated as a violation of national security, an indication of how low cooperative spirit s had dipped. As a report on morale explained, most of those staying behind were volunteers. Reasons given included enjoyment of the Ukraine, belief continued service could aid promotion, and a common idea that an inactive life of relative comfort in the quiescent

rump of Eastern Command seemed preferable to a return to the rush of USSTAF bases in Italy or England.⁸⁰ Personnel who favored such a condition delivered the low quality of service that could be anticipated.

The Long Twilight of Eastern Command:

6 October, 1944 - 23 June, 1945

By October of 1944, the role of Eastern Command had shrunk to the undemanding tasks of maintaining a U.S. presence in the Soviet Union and collecting strayed or damaged aircraft from behind Soviet lines. As a cripple collection site, Poltava performed some service. There were no more shuttles, nor were there more photo missions. The continued movement of war fronts in both east and west and the near impotence of the Luftwaffe made any strategic or tactical purpose for FRANTIC shuttle raids irrelevant. (Map 23)

The two hundred men left at Poltava adopted the slogan FBU (Forgotten Bastards of the Ukraine). General Kessler and General Walsh left on 15 October, to be replaced by Colonel Thomas K. Hampton and Brigadier General Edmund W. Hill, respectively. Walsh's parting instructions to Colonel Hampton warned him of the poor state of discipline at the shrunken US outpost. Colonel Hampton took charge of the USAAF base at Poltava. Major General Kovalev assumed command of the Russian troops.⁸¹

A depressing series of incidents marred the rest of the American-Soviet mission. The first one did not happen in the USSR, though its repercussions vibrated to Poltava. On 7 November, 1944, shuttle-experienced fighter pilots of the 82nd Fighter Group strafed

EUROPE: OCT 1944

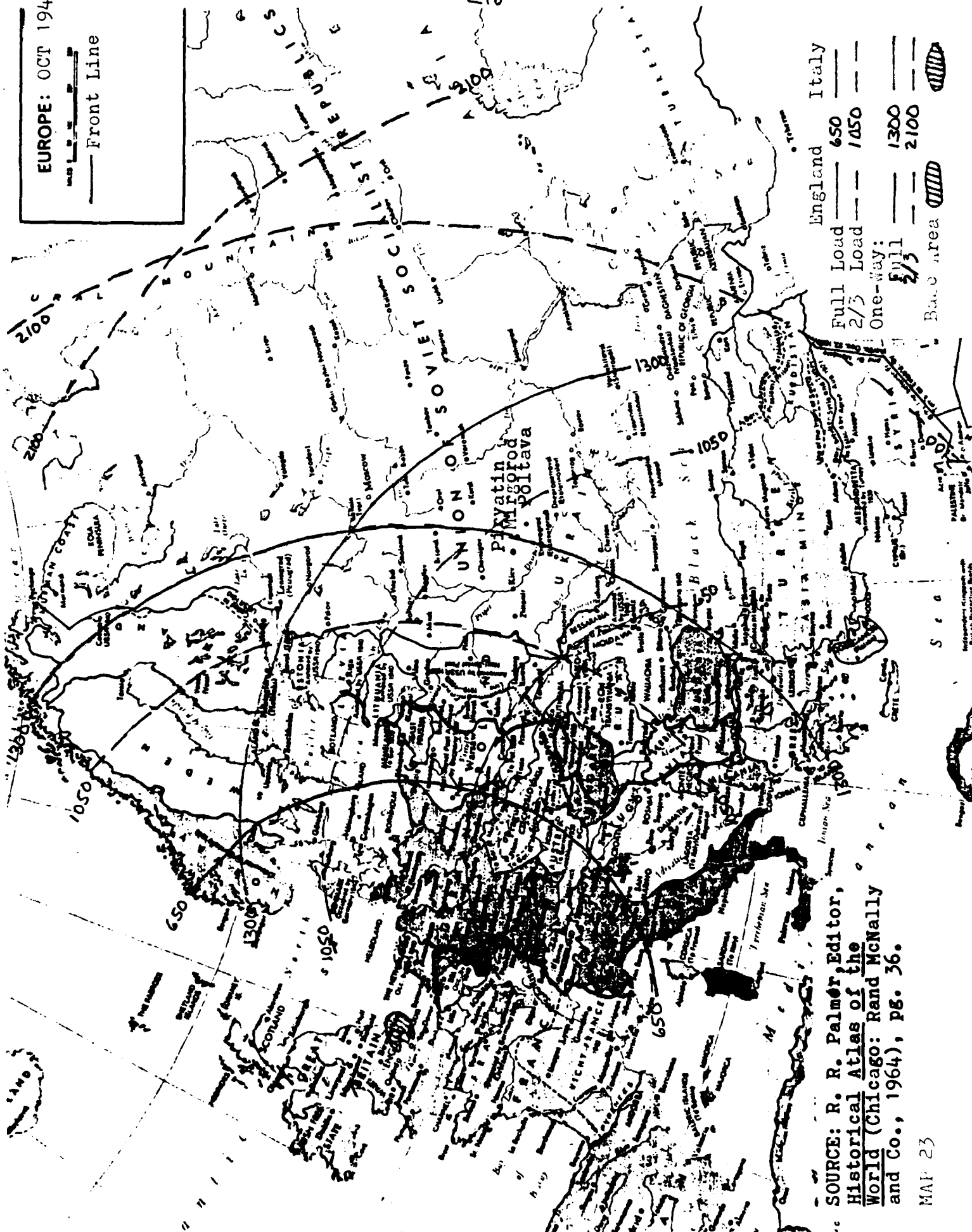
Front Line

218

	England	Italy
Full Load	650	—
2/3 Load	—	1050
One-Way	—	1300
Full	2/3	2100
Base area		

SOURCE: R. R. Palmer, Editor,
Historical Atlas of the
World (Chicago: Rand McNally
and Co., 1964), pg. 36.

MAP 23



what they thought was an enemy column near Krusevac, Yugoslavia. In fact, the P-38 Lightnings were sixty miles east of their target region due to a navigation error. The American twin-engine planes tore up the column, destroying twenty vehicles, killing six men, and wounding more. Planes came down on the American craft from above, firing their cannons. In a confused dogfight, the Americans shot down three of the defending aircraft and lost two Lightnings in turn. But then, one of the enemy came up close enough for a U.S. flight leader to see the red stars on his Yak fighter. The 82nd had shot up a Russian unit. A Soviet Army lieutenant general was among the six dead on the ground. The only American excuse was misorientation, and a vague charge that the Yaks shot first.⁸²

On the 20th of November, 1944, Colonel Hampton's men added to the bad feeling created by the Krusevac affair. An American warrant officer named Cannon, serving as officer of the guard, found a Soviet sentry asleep. Cannon took the drowsing soldier's rifle, then fired a pistol at the Russian private's feet to awaken him. When the shocked UVS man struggled to his feet, Cannon struck him. It later came out that Warrant Officer Cannon was drunk at the time of the event.⁸³

In the midst of the bad humor at Poltava, Colonel Hampton decided to take a hard line with Kovalev, who had complained about American profiteers. Convinced Soviet harassment had caused American black marketeering, Hampton announced that it was Kovalev's problem. Hampton also accused the Russians of wide-scale theft.

Incidents continued, with U.S. planes under fire in the Soviet Union and U.S. aircraft firing at Yaks over Germany early in 1945. Hampton's attitude grew worse by the day, as he blamed the UVS for

every slight, imagined or real (and by this point, they were often quite real). AAF planes were grounded on whims. All Soviet women were placed totally off-limits. The 310th IAD, the Poltava complex fighter unit, pulled out for active service in the January, 1945 drive on Berlin. Wounded Americans had their departure visas delayed and cancelled. American crews tried to spirit out a Polish prisoner and a defecting Red Army noncommissioned officer; in both cases, they were caught. Hampton did nothing but accuse the Soviets for their border control policies. Judging him tactless, Deane relieved Thomas Hampton of command on 7 April, 1945, almost a year to the day of Griffith's relief for similar reasons.⁸³

Even the shift of leadership proved disorganized. Though sacked, Hampton remained in charge until 11 April, 1945 as he awaited his flight out of Poltava. Command passed to a certain Major Kowal for a single day, but he was removed after Major General Deane discovered violent objections to Kowal from his old negotiating nemesis, General Slavin of the Red Army General Staff. Captain Robert L. Trimble, two and one half months in the USSR, took command. In a strange arrangement, a U.S. major was appointed Captain Trimble's second in command. Trimble's idle troops contributed two more ugly scenes. Heedless G.I. drivers killed a Russian woman and then a seven year old girl in April and May accidents. Alcohol was suspected, and the April homicide involved a member of the same aircrew that had tried to smuggle out the Polish prisoner. General Kovalev protested vigorously.

The collapse of Germany and the final operations of the Pacific war transpired without any help from Eastern Command. On 19 April, 1945, the Joint Chiefs of Staff cancelled all future combined US-USSR military operations on Soviet soil. General of the Army George

Marshall cabled General of the Army Dwight D. Eisenhower on 9 May, 1945, the day after Germany surrendered. His message was brief: "evacuate Poltava."

It took until June, 1945 to complete the measures needed to close out the American post. A final inspection by the Moscow Military Mission cleared the last American contingent for departure on 22 June, 1945, four years to the day since Hitler invaded the USSR and one year since Colonel Antrup's German bombers had raided Poltava. Two C-47s took off on 23 June, 1945. The FRANTIC experiment was over.⁸⁵

CHAPTER 3

Notes

1. Spaatz, "Shuttle Bombing Operations to Russia," 3 May, 1944; "MAAF History of FRANTIC," pp. 18, 28; Lieutenant General Ira Eaker, "Message to Spaatz," 2 June, 1944, USAF Historical Research Center, Record 622.430-6, Maxwell AFB, Alabama; Newby, Target Ploesti: View from a Bombsight, pp. 27-27.
2. "Eastern Command Narrative of Operations," 2 June, 1944 and "Debrecen (sic) Damage Assessment, with revision," June 1944 in USAF Historical Research Center, Record 622.430-6, Maxwell AFB, Alabama.
3. Nikitin, "Chelnochnye operatsiy," pp. 43-44; Harriman and Abel, Special Envoy to Churchill and Stalin, pp. 312-313; Deane, The Strange Alliance, pp. 119-120; "Assumption of Command, General Order No. 6" 3 June, 1944.
4. Nikitin, "Chelnochnye operatsiy," pg. 44; Harriman and Abel, Special Envoy to Churchill and Stalin, pg. 313; Deane, The Strange Alliance, pp. 119-120; "MAAF Message to 15th Air Force: Operation FRANTIC," 27 May, 1944; "MAAF History of FRANTIC," pg. 1.
5. Deane, The Strange Alliance, pg. 120; "FRANTIC Daily Progress Reports, January-August, 1944"; Harriman and Abel, Special Envoy to Churchill and Stalin, pg. 313; Nikitin, "Chelnochnye operatsiy," pg. 44; Major General John R. Deane, "Message to Spaatz," 26 May, 1944, USAF Historical Research Center, Record 622.430-6, Maxwell AFB, Alabama; "Operations Summary," 16 June, 1944, USAF Historical Research Center, Record 522.01-1, Maxwell AFB, Alabama.
6. Deane, The Strange Alliance, pp. 121-121.
7. Ibid, pg. 121; "Photo Intelligence Section," 1944, USAF Historical Research Center, Record 522.01-1, Maxwell AFB, Alabama; Harriman, The Strange Alliance, pg. 313; "Air Force Links Russia with Bases There; Forts Are in USSR," New York Times, 3 June, 1944, sec. 1, pg. 1.
8. "Letayushchie kreposti," Pravda, 4 June, 1944, sec. 1, pg. 3; "Na baze letayushchikh kreposty," Izvestiya, 4 June, 1944, sec. 1, pg. 4; N. Denisov, "American Fliers at a Soviet Base," Information Bulletin, Embassy of the USSR, 17 June, 1944, pg. 4; "Report of FRANTIC JOE Originally Intended for Gen Spaatz But Never Sent," 1944, USAF Historical Research Center, Record 622.430-6, Maxwell AFB, Alabama.
9. "MAAF History of FRANTIC," pg. 24-25; Spaatz, "Message to Eaker, Kessler, Doolittle," 13 June, 1944; Deane, The Strange Alliance, pg. 121; "Administrative Annex to Field Order No. 371," June, 1944, USAF Historical Research Center, Record 522.01-1, Maxwell AFB, Alabama; "Conversation Record, 5 June, 1944, Subject: Activities of the American Air Force," 5 June, 1944, Major General Robert L. Walsh, "Message to Eaker," 7 June, 1944, and Lieutenant General Carl Spaatz, "Message to Eaker," 23 April, 1944 in USAF Historical Research Center, Record 622.430-6, Maxwell AFB, Alabama.
10. Nikitin, "Chelnochnye operatsiy," pg. 46; "Operations Summary," 16 June, 1944; "History of Armament-Automotive Section, Eastern Command," 1944; "History of Eastern Command Maintenance Section," 1 August, 1944; "Comments on Eastern Command Initial Operational Period," 12 June, 1944, USAF Historical Research Center, Record 522.01-1, Maxwell AFB, Alabama; Brigadier General Laurie Norstad, "Memorandum to Air Commander in Chief," 12 June, 1944,

"Operations Order, AAF Station #559," 5 June, 1944, "Eastern Command Narrative of Operations, 6 June, 1944," 1944, and "Galati P.R.U., 6 June, 1944," 6 June, 1944 in USAF Historical Research Center, Record 622.430-6, Maxwell AFB, Alabama.

11. Norstad, "Memorandum to Air Commander in Chief," 12 June, 1944; "Operations Summary," 16 June, 1944; "Focsani Damage Assessment," June, 1944 and "Excerpt, MAAF Intops Summary No. 325, Focsani North Airdrome Installation, 5 Wing," 11 June, 1944, USAF Historical Research Center, Record 622.430-6, Maxwell AFB, Alabama.

12. "MAAF History of FRANTIC," pg. 1.

13. "FRANTIC Daily Progress Reports, January-August, 1944"; "History of Eastern Command, Chapter I, Strategy and Mission," pg. 64; "Personal Communication, William Averell Harriman to President Roosevelt," 11 June, 1944 in Europe (1944), pp. 965-966; Major General Hugh J. Knerr, "Message to Frank," 20 June, 1944, USAF Historical Research Center, Record 622.430-6, Maxwell AFB, Alabama.

14. Lee Kennett, A History of Strategic Bombing (New York: Charles Scribner's Sons, 1982), pp. 166-167; Russell F. Weigley, Eisenhower's Lieutenants (Bloomington: Indiana Univ. Press, 1981), pg. 94.

15. "History of the Eastern Command, Chapter III, Combat Operations," 1944, USAF Historical Research Center, Record 522.01-2, Maxwell AFB, Alabama, pp. 25-26; Lieutenant Colonel William M. Jackson, "Report on Trip to Kiev to See 1st. Lt. David K. Rowe," 29 June, 1944, USAF Historical Research Center, Record 522.01-1, Maxwell AFB, Alabama; Lieutenant General Carl Spaatz, "Message to Eaker, Twining Concerning F-5 Flights," 19 June, 1944, USAF Historical Research Center, Record 622.430-6, Maxwell AFB, Alabama.

16. Glenn B. Infield, The Poltava Affair (New York: Macmillan Publishing Co., Inc., 1973), pp. 108-109, 125; "FRANTIC Daily Progress Reports, January-August 1944"; Major General Nathan F. Twining, "Message to Eaker," 11 June, 1944, USAF Historical Research Center, Record 622.430-6, Maxwell AFB, Alabama.

17. Robert L. Walsh, "Eastern Command Fact Book," in Glenn B. Infield, The Poltava Affair (New York: Macmillan Publishing Co., Inc., 1973), pg. 242; United States Strategic Bombing Survey, Oil Division Final Report, Book 109 (Washington, D.C.: U.S. Govt. Printing Office, 1947), pg. 57; United States Strategic Bombing Survey, Oil Division Final Report Appendix, Book 110 (Washington, D.C.: U.S. Govt. Printing Office, 1947), pg. 82; Colonel Archie J. Old, "Report on Shuttle Mission to Russia," 6 July, 1944, USAF Historical Research Center, Record 522.01-1, Maxwell AFB, Alabama; W.L. White, Report on the Russians (New York: Harcourt, Brace, & Co., 1945), pg. 178; Dr. Noble Frankland, The Strategic Air Offensive Against Germany, 4 vols. (London: Her Majesty's Stationary Office, 1961), vol. III: Victory, pg. 46.

18. USSBS, Oil Division Final Report, pp. 121-126, 137; White, Report on the Russians, pp. 177-178; Old, "Report on Shuttle Mission to Russia," 6 July, 1944.

19. White, Report on the Russians, pg. 178.

20. USSBS, Oil Division Final Report, pg. 82; Old, "Report on Shuttle Mission to Russia"; Frankland, Victory, pg. 46; Colonel Paul T. Cullen, "Eastern Command Targets," 11 July, 1944, USAF Historical Research Center, Record 622.430-6, Maxwell AFB, Alabama.

21. Refer to Appendix Two for complete data on Soviet UUS aircraft that served at the Poltava air complex. Bialer, Semenov, ed.,

Stalin and His Generals: Soviet Military Memoirs of World War II (New York: Pegasus Books, 1969), pp. 380-381; Harold Faber, Luftwaffe: A History (New York: New York Times Books, 1977), pg. 229.

22. Nikitin, "Chelnochnye' operatsiy," pg. 43; Old, "Report on Shuttle Mission to Russia"; "Report of Enemy Land Mining Operation," 2 August, 1944; W.L. White, Report on the Russians, pg. 179; Adolph Galland, The First and the Last, trans. Mervyn Savill (New York: Henry Holt & Co., 1954), pp. 283-284; Heinrich Hoffer, "A Lesson in Security" in Headquarters, U.S. Army Air Forces, Mediterranean Theater of Operations, Intelligence Section, Defeated (Washington, D.C.: Headquarters, Army Air Forces, 1946), pg. 69.

23. Infield, The Poltava Affair, pp. 140-149; Hopper, "Interview with Brigadier General Alfred A. Kessler"; Old, "Report on Shuttle Mission to Russia"; "Report of Proceedings of Board of Officers."

24. Old, "Report on Shuttle Mission to Russia"; White, Report on the Russians, pp. 122, 184-190; Deane, The Strange Alliance, pg. 122; Nikitin, "Chelnochnye' operatsiy," pp. 44-45; Robert Jackson, The Red Falcons (Brighton: Clifton Books, 1970), pg. 142.

25. "Enemy Air Attacks Against Eastern Command Bases," 25 June, 1944, Lieutenant Colonel William M. Jackson, "Report of Activity of Two Russian Soldiers during Air Attack," 24 June, 1944 and "Observation of Medical Service during Air Attack," 1944 in USAF Historical Research Center, Record 522.01-1, Maxwell AFB, Alabama; "History of Eastern Command Maintenance Section," 1 August, 1944; "Report of Proceedings of Board of Officers"; White, Report on the Russians, pp. 190-196. There is an erroneous report of fifteen F-51 Mustang fighters supposedly destroyed at Poltava. Craven and Cate, Europe: Argument to V-E Day, pg. 314 recorded that incorrect information, which was repeated in Morrison, Fortress Without a Roof, pg. 260 and Lukas, Eagles East, pp. 199-200. The Old documentary report and the "Report of Proceedings of Board of Officers" both clearly record that the fighters lost at Poltava were Soviet Yaks, since all U.S. fighters were at Pinyatin. Nikitin confirmed this Russian loss at Poltava in Nikitin, "Chelnochnye' operatsiy," pg. 45.

26. See Appendix Two for complete comparative information on U.S. and USSR aircraft and antiaircraft equipment involved or contemplated for the Eastern Command area. Craven and Cate, Vol. 6: Men and Planes (1952), pp. 213-214; Old, "Report on Shuttle Mission to Russia"; Hopper, "Interview with Brigadier General Alfred A. Kessler"; "Report of Proceedings of Board of Officers"; Esposito, 1900-1953, map 42; Erickson, Road to Berlin, pp. 210-214, 216-217; "Antiaircraft Defenses, Eastern Command Bases," 19 July, 1944, USAF Historical Research Center, Record 522.115, Maxwell AFB, Alabama; "personnel," 3 August, 1944, Colonel S.K. Kovalev, "Message to Colonel Cullen," 30 July, 1944 and "Message to Colonel Cullen," 31 July, 1944, USAF Historical Research Center, Record 522.01-1, Maxwell AFB, Alabama; Colonel Edward D. Gray, "German Bombing of Poltava Airdrome on 21st June 1944," 29 June, 1944, USAF Historical Research Center, Record 522.161-5, Maxwell AFB, Alabama; Stephen Ross, "Effectiveness of Antiaircraft Defenses," Strategy and Tactics 67, March-April, 1978, pg. 29.

27. Old, "Report on Shuttle Mission to Russia."

28. Deane, The Strange Alliance, pg. 122; "Operational Factors, Eastern Command Bases," 25 June, 1944 and "Relations and Continuity of Air Operations from Bases in the USSR," 1944, USAF Historical Research

Center, Record 522.01-1, Maxwell AFB, Alabama.

29. "Relations and Continuity of Air Operations from Bases in the USSR"; Lieutenant General Ina Eaker, "Message to Deford," 25 June, 1944, USAF Historical Research Center, Record 622.430-6, Maxwell AFB, Alabama.

30. Nikitin, "Chelnochnyye operatsiy," pg. 45; Erickson, Road to Berlin, pp. 227, 233; Lieutenant General Carl Spaatz, "Message to Walsh," 22 June, 1944, USAF Historical Research Center, Record 622.430-6, Maxwell AFB, Alabama.

31. "FRANTIC Daily Progress Reports, January-August, 1944"; "History of the Armament-Automotive Section, Eastern Command," 1 August, 1944; Lieutenant General Carl Spaatz, "Message to Eaker, Twining Concerning Next FRANTIC Mission," 19 June, 1944, Major General Nathan Twining, "Message to Eaker," 8 July, 1944, Lieutenant General Ina Eaker, "Message to Spaatz," 10 July, 1944, Major General Robert L. Walsh, "Message to Cullen," 2 July, 1944, "FRANTIC III," 1 August, 1944, USAF Historical Research Center, Record 522.161-5, Maxwell AFB, Alabama; "Operation FRANTIC III 22-26 July, 1944/ Operation FRANTIC IV 4-6 August, 1944, Historical Monograph," 1944 in USAF Historical Research Center, Record 622.430-6, Maxwell AFB, Alabama.

32. "History of the Eastern Command, Chapter I, Strategy and Mission," pp. 65, 66; Weigley, Eisenhower's Lieutenants, pp. 145, 151-153; Newby, Target Ploesti: View From a Bombsight, pp. 161, 166.

33. "Operation FRANTIC III 22-26 July, 1944/Operation FRANTIC IV 4-6 August, 1944, Historical Monograph"; "Narrative Report of FRANTIC III Operation, with Annotation," 28 July, 1944, USAF Historical Research Center, Record 522.161-5, Maxwell AFB, Alabama; "Narrative Account of Shuttle Mission No. 593, 31st Fighter Group, Zilistea, Rumania, 22 July, 1944," 27 July, 1944, "Narrative Account of Shuttle Mission to Russia (FRANTIC 3)," 1944, "Special Account of Fighter Sweep to Russia, 31st Fighter Group," 1944 and Captain J.W. Sperling "Account of FRANTIC 3 Operations, 31st Fighter Group," 1944 in USAF Historical Research Center, Record 622.430-6, Maxwell AFB, Alabama.

34. "Narrative Report of FRANTIC III Operation, with Annotation," 28 July, 1944; Kovalev, "Message to Cullen," 31 July, 1944; "Special Account of Fighter Sweep to Russia, 31st Fighter Group"; "Narrative Report, Mission No. 594, 31st Fighter Group, Mielec, Rumania, 25 July, 1944," 27 July, 1944.

35. Sperling, "Account of FRANTIC 3 Operations, 31st Fighter Group."

36. "Operation FRANTIC III 22-26 July, 1944/Operation FRANTIC IV 4-6 August, 1944, Historical Monograph"; "Narrative Account of Shuttle Mission to Russia, FRANTIC 3"; "Item 6, Intops Summary No. 370," 26 July, 1944, USAF Historical Research Center, Record 622.430-6, Maxwell AFB, Alabama.

37. "History of Eastern Command, Chapter VII, Logistics," pp. 6, 9; "Antiaircraft Defenses, Eastern Command Bases," 19 July, 1944; "Chronological Record of the FRANTIC Project"; "Excerpt, History of the MAHF, Chapter XVII, Relations with Russia," 1944, pg. 3 and Lieutenant General Carl Spaatz, "Message to Eaker," 10 August, 1944, in USAF Historical Research Center, Record 622.430-6, Maxwell AFB, Alabama.

38. "Fourth and Fifth FRANTIC Mission," 10 August, 1944, USAF Historical Research Center, Record 522.161-5, Maxwell AFB, Alabama; "FRANTIC IV," 1944, "Item 20, Intops Summary No. 381," 9 August, 1944,

"Narrative Report, Mission No. 61, 52nd Fighter Group, Focsani, Rumania, 4 August, 1944," 7 August, 1944, "Narrative Report, Mission No. 745, 82nd Fighter Group, Focsani, Rumania, 4 August, 1944, "Third Supplement to 52nd Fighter Group Narrative Report, Mission No. 61, " 17 August, 1944; "Second Supplement to 52nd Fighter Group Narrative Report, Mission No. 62 (sic)," 16 August, 1944 in USAF Historical Research Center, Record 622.430-6, Maxwell AFB, Alabama.

39. "FRANTIC IV"; "Narrative Report, Mission No. 745, 82nd Fighter Group, Focsani, Rumania, 4 August, 1944"; "Extract, 15th Air Force Daily News Release," August, 1944, USAF Historical Research Center, Record 622.430-6, Maxwell AFB, Alabama.

40. "Item 17, Intops Summary No. 381," 9 August, 1944, "Narrative Report, Mission No. 746, 82nd Fighter Group, Ploesti-Bucharest, Rumania, 6 August, 1944," 6 August, 1944, "Narrative Report, Mission No. 745, 52nd Fighter Group, Ploest-Bucharest Area, Rumania, 6 August, 1944," 6 August, 1944, and Lieutenant General Carl Spaatz, Message to Eaker," 4 August, 1944, in USAF Historical Research Center, Record 622.430-6, Maxwell AFB, Alabama.

41. "FRANTIC IV."

42. Spaatz, "Message to Eaker," 4 August, 1944; "History of Eastern Command, Chapter I, Strategy and Mission," pg. 67; Lieutenant General Carl Spaatz, "Message to Doolittle," 30 July, 1944, USAF Historical Research Center, Record 622-430-6, Maxwell AFB, Alabama.

43. "Fourth and Fifth FRANTIC Missions"; United States Strategic Bombing Survey, Aircraft Division Industry Report, Book 4 (Washington, D.C.: U.S. Govt Printing Office, 1947), pp. 32, 52-54, 61, 72, 73; Albrt Speer, "The Effects of the Allied Bombing of Germany" in Headquarters, U.S. Army Air Forces, Mediterranean Theater of Operations, Intelligence Section, Defeated (Washington, D.C.: Headquarters, Army Air Forces, 1946), pg. 12.

44. Frankland, Victory, pg. 46; Cullen, "Eastern Command Targets"; "Fourth and Fifth FRANTIC Missions"; USSBS, Oil Division Final Report, pg. 82, pp. 121-126.

45. "Russian Bombs," 29 April, 1944; "Fourth and Fifth FRANTIC Missions"; Arnold, "Message to Spaatz," 18 July, 1944; "History of Armament-Automotive Section in Eastern Command"; "Photographic Interpretation Report No. G53, Romania Aerodrome Gilistea (sic)," 1944, USAF Historical Research Center, Record 622.430-6, Maxwell AFB, Alabama.

46. Esposito, 1900-1953, map 42.

47. Knerr, "Message to Frank," 20 June, 1944; Spaatz, "Message to Eaker," 10 August, 1944; Lieutenant General Ira Eaker, "Message to Spaatz," 10 August, 1944, USAF Historical Research Center, Record 622.430-6, Maxwell AFB, Alabama; "Record of Special Events, Eastern Command," 1944, USAF Historical Research Center, Record 522.01-1, Maxwell AFB, Alabama.

48. Sperling, "Account of FRANTIC 3 Operations, 31st Fighter Group"; Lieutenant Colonel L.A. Neveleff, "Mission to Eastern Command, USSTAF," 5 August, 1944, USAF Historical Research Center, Record 622.430-6, Maxwell AFB, Alabama.

49. "Personnel Section History"; "Report on Status of Morale in the Eastern Command."

50. "FRANTIC Daily Progress Reports, January-August, 1944"; Colonel S.K. Kovalev, "Message to Cullen," 4 August, 1944, USAF Historical Research Center, Record 522.01-1, Maxwell AFB, Alabama.

51. Neveleff, "Mission to Eastern Command, USSTAF"; "Record of

Special Events, Eastern Command"; Colonel Paul T. Cullen, "Message to Eaker," 18 August, 1944, USAF Historical Research Center, Record 622.430-6, Maxwell AFB, Alabama.

52. "History of Eastern Command, Chapter I, Strategy and Mission," pp. 67, 71; Major General Hugh J. Knerr, "FRANTIC Logistics Situation," 25 August, 1944, USAF Historical Research Center, Record 522.161, Maxwell AFB, Alabama.

53. "Minutes of Talk, Harriman and Walsh, 2 August, 1944," 2 August, 1944, USAF Historical Research Center, Record 622.430-6, Maxwell AFB, Alabama; "Digest of Conference Held with General Deane on 8th and 10th August, 1944," 1944, USAF Historical Research Center, Record 522.161-5, Maxwell AFB, Alabama.

54. Harriman and Abel, Special Envoy to Churchill and Stalin, pg. 341; Major General John R. Deane, "Message to Arnold," 26 August, 1944 and Major General Robert L. Walsh, "Message to Kessler," 28 August, 1944 in USAF Historical Research Center, Record 622.430-6, Maxwell AFB, Alabama.

55. Deane, The Strange Alliance, pg. 233; "Digest of Conference Held with General Deane on 8th and 10th August, 1944."

56. "Communication, William Averell Harriman to U.M. Molotov," 20 August, 1944, "Communication, Marshal J. V. Stalin to President Roosevelt," 22 August, 1944, "Communication, Embassy of the Soviet Union to the Department of State," 29 September, 1944 in Europe (1944), pp. 984, 999-1000; Deane, The Strange Alliance, pp. 249-265; Costello, The Pacific War 1941-1945, pg. 571.

57. "History of Eastern Command, Chapter I, Strategy and Mission," pg 25; "Excerpt, History of the MAAF, Chapter XVII, Relations with Russia," pp. 5-14; Lieutenant General Carl Spaatz, "Personal to Arnold," 1944, USAF Historical Research Center, Record 522.01-1, Maxwell AFB, Alabama.

58. Nikitin, "Chelnochnye' operatsiy," pg. 46.

59. Erickson, Road to Berlin, pg. 272.

60. Ibid., pp. 272-289; T. Bor-Kommandorski, "The Unconquerables," Reader's Digest, February, 1946, pp. 139, 145.

61. Spaatz, "Message to Doolittle," 30 July, 1944; "Record of Special Events, Eastern Command"; "FRANTIC Daily Progress Reports, January-August, 1944."

62. United States Strategic Bombing Survey, Auto Union AG, Chemnitz and Zwickau, Book 84 (Washington, D.C.: U.S. Govt. Printing Office, 1947), pp. 1, 2, 9, 15, 17; "Summary of Sixth FRANTIC Mission," 13 September, 1944, USAF Historical Research Center, Record 522.161-5, Maxwell AFB, Alabama.

63. "Summary of Sixth FRANTIC Mission."

64. Bor-Kommandorski, "The Unconquerables," pp. 161-164; Erickson, Road to Berlin, pg. 289; "Summary of Seventh FRANTIC Mission," 15 September, 1944 and "Summary of Eighth FRANTIC Mission," 19 September, 1944 in USAF Historical Research Center, Record 522.161-5, Maxwell AFB, Alabama.

65. Erickson, The Road to Berlin, pp. 289-290; Weigley, Eisenhower's Lieutenants, pp. 226, 269-270, 305-317.

66. "Summary of Eighth FRANTIC Mission"; "History of Eastern Command, Chapter III, Combat Operations," pg. 12.

67. "Record of Special Events, Eastern Command"; "History of Eastern Command, Chapter I, Strategy and Mission," pg. 69; "History of the Eastern Command, 1 October, 1944 through 31 March, 1945," 1945, USAF Historical Research Center, Record 522.01-03, pp. I-5, IV-2;

- "Message, Joint Chiefs of Staff to Spaatz," 19 April, 1945, USAF Historical Research Center, Record 522.161-5, Maxwell AFB, Alabama.
68. "Conference Notes, USSTAF Headquarters," 8 February, 1944.
69. Hopper, "Interview with Brigadier General Alfred A. Kessler."
70. "Brief History of Transportation," 13 September, 1944; "History of Supply Division, Eastern Command," 1944; "Quartermaster History through August, 1944," 1944; "Outline of Operations, Corps of Engineers Section, March to October, 1944," 1944; Nikitin, "Chelnochnye operatsiy."
71. "History of Eastern Command, Chapter V, Personnel," pp. 50-51; "History of Eastern Command, Chapter VII," pg. 13; Deane, The Strange Alliance, pg. 116; White, Report on the Russians, pp. 122, 171; Hopper, "Interview with Brigadier General Alfred A. Kessler"; "History of the Medical Section," 15 August, 1944 and "Report of Organization of a Special Service Program for Eastern Command," 15 August, 1944 in USAF Historical Research Center, Record 522.01-1, Maxwell AFB, Alabama.
72. "Report of Organization of a Special Service Program for Eastern Command"; Hopper, "Interview with Brigadier General Alfred A. Kessler"; "MAAF History of FRANTIC," pg. 24; Deane, The Strange Alliance, pg. 116.
73. Deane, The Strange Alliance, pg. 116; "Report of Organization of a Special Service Program for Eastern Command"; "History of Eastern Command, Chapter V, Personnel," pp. 54-58; "Story of Men Running New Russian Airbases," 3 June, 1944, USAF Historical Research Center, Record 522.01-1, Maxwell AFB, Alabama.
74. "Administrative Annex to Field Order No. 371," June, 1944; "History of Eastern Command Maintenance Section," 1 August, 1944; "History of Eastern Command, Chapter V, Personnel," Notes Page 4; Seminyaga and Shinkarev, Osvobozhdenie territorii CCCP i evropeickukh stran vojna na tikhm okeane i v azii, pg. 512.
75. Nikitin, "Chelnochnye operatsiy," pg. 42; "Personnel Section History"; White, Report on the Russians, pg. 170.
76. Jackson, "Observation of Medical Service during Air Attack", 25 June, 1944; Jackson, "Report of Activity of Two Russian Soldiers during Air Attack," 24 June, 1944; White, Report on the Russians, pp. 194-196.
77. "MAAF History of FRANTIC," pg. 25; "History of Eastern Command, Chapter V, Personnel," pg. 151; "Communication, Secretary of State to Ambassador William Averell Harriman," 6 December, 1943 in The British Commonwealth, Eastern Europe, the Far East, pp. 723-725; White, Report on the Russians, pp. 180-181.
78. Nikitin, "Chelnochnye operatsiy," pg. 46; "History of Eastern Command, Chapter V, Personnel," pg. 139; "Reported Incidents Involving American Soldiers and Russian Personnel," 10 July, 1944, USAF Historical Research Center, Record 522.01-1, Maxwell AFB, Alabama.
79. "Report on the Status of Morale in the Eastern Command"; Stephen J. Zand, "Memorandum of a Civilian Air Technician," 11 October, 1944 and "History of AAF Station 560, April 1944 to June, 1944," June, 1944.
80. "History of AAF Station 560, April 1944 to June, 1944"; "Report on the Status of Morale in the Eastern Command"; "Narrative Account of Shuttle Mission to Russia, FRANTIC 3"; "History of Eastern Command, Chapter I, Strategy and Mission," pp. 68-69; "Security

Eastern Command," 15 September, 1944, USAF Historical Research Center, Record 522.01-1, Maxwell AFB, Alabama.

81. "History of Eastern Command, Chapter III, Combat Operations," pg. 11; "History of Eastern Command, Chapter V, Personnel," pp. 104, 150; "History of Eastern Command, 1 October 1944 through 31 March, 1945," pp. I-5, IV-2.

82. "History of Eastern Command, Chapter III, Combat Operations," pp. 32-33; Deane, The Strange Alliance, pp. 131-135.

83. "History of Eastern Command, Chapter V, Personnel," pg. 104.

84. "History of Eastern Command, Chapter VIII, Politics," pg. 92; Deane, The Strange Alliance, pg. 123; Svetlishin, Voyska PUO strany v velikoy otechestvennoy voyne, pg. 192; "History of Eastern Command, 1 April 1945 through 23 June, 1945," 1945, USAF Historical Research Center, Record 522.01-04, Maxwell AFB, Alabama, pg. I-7.

85. "History of Eastern Command, Chapter V, Personnel," pg. 112; "History of Eastern Command, 1 April, 1945 through 23 June, 1945," pg. III-8; General of the Army George Marshall, "Message to Eisenhower," 9 May, 1945, USAF Historical Research Center, Record 622.430-6, Maxwell AFB, Alabama.

CHAPTER 4

THE VALUE OF THE FRANTIC PROJECT

Evaluations: Official and Personal

The American/Russian shuttle-bombing experience ended on a sour note. The unique nature of the operations certainly demanded consideration of their worth in the general war effort. Both American and Soviet participants recorded their views, and official histories of both powers had something to say about the unusual collaboration. These pictures of the program offer a starting point for a more thorough analysis of the results of FRANTIC and its ancillary activities.

American attitudes can be divided into the impressions of unit historians and contemporary official documents, the perspectives of participants in their memoirs, and the wider views of the official Army and Army Air Force histories of the Second World War. The unit record-keepers in Eastern Command created an excellent history of all phases of the shuttle-bombing mission. The final draft and several fragments of earlier versions have survived, presenting the Eastern Command's picture of its own effectiveness.

Eastern Command's official history painted an unflattering scene. In dispassionate terms, supported by ample annotations and source documents, the unnamed authors determined that the Eastern Command delivered "modest results" in its military ventures. The "History of the Eastern Command" credited the shuttle crews with the attack of

only three truly high priority targets (Drohobycz and Trzebinia crude oil refineries, Rahmel airframe factory). The only enemy facilities actually out of range seemed to be Mielec, Focsani, and Galati, and that was only due to the use of P-38 fighters not intended by the original scheme. The best military result that this internal record would admit revolved around the possible dissolution of German fighter strength and the provision of "operational flexibility" (a bit of jargon meaning that one could land in the USSR if one so desired).¹

Other chapters of the unit chronicle recorded the friction between USAAF and VVS soldiers, the consequences of the split command structure (Spaatz - operations and Deane - administration), and the collection of accidental air to air and ground to air engagements between the Army Air Force and the VVS. Special notation charged that diplomatic and political factors outweighed military considerations. It should be recalled that the writers of the Eastern Command history composed their work just after leaving the USSR, so some of their comments reflected prevailing atmospheres at the U.S. air stations. However, the overall tone was more critical of the USAAF leadership than the Soviet Air Force. Soviet fliers, Air Force leaders, and logistics assistance were praised. On the other hand, "Chapter VIII, Politics" painfully retraced the errors and foibles of both Colonel John Griffith and Colonel Thomas K. Hampton. There was no attempt to blame the Soviets for the troubles of Eastern Command.² Overall, the "History of the Eastern Command" presented the basic facts of the shuttle project with candor and honesty. As a source for later works, this history depicted the passage of events in strategy, combat operations, intelligence, personnel, logistics, and politics. Still,

there were no conclusions drawn, aside from editorial commentary throughout the text and an overall objective tone.

There was no approved evaluative chapter in the unfinished "History of Eastern Command," though a proposed "Summaries, Chapter 12, Conclusions" was included in the Army Air Force files. The draft "Chapter 12" displayed the same neutral style as the incomplete "History," and it gave an indication as to how the command rated its own performance. Chapter 12 observed that the Soviets had shown surprising flexibility with regard to many issues. After all, the UVS accepted fighter sweeps (though only bomber shuttle were arranged), excused the American inability (or unwillingness) to meet its original commitment of two to four shuttles per month, designated and maintained dispersion fields after the German raids, allowed increased U.S. personnel (closer to 1300 than the approved 1200), and delivered food, fuel, bombs, repair service augmentation, housing, ground security, winterization, and even entertainment. As for the efficacy of the USAAF effort, the unedited conclusions segment judged the air efforts less effective than standard strikes. On balance, the chapter regarded the importance of the entire mission as a source of experience about the USSR and stated that, after all, it was the first significant joint combat operation.³

Three other contemporary accounts offered reinforcing viewpoints to that of Eastern Command. The Mediterranean Allied Air Forces (MAAF) "MAAF History of FRANTIC," written just after FRANTIC JOE transpired, had already reached the same verdicts as the more fulsome, later "History of the Eastern Command." "MAAF History" saw the military value of FRANTIC as minor. The major emphasis was on the "acid test" of military cooperation at the soldier level. On 25 June, 1944, a work

titled "Operational Factors, Eastern Command Bases" explained that the Poltava location was not really too good. This document stated that the FRANTIC targets were of "limited importance," and could be hit better from elsewhere. A later summer report, related to the July-August, 1944 expansion plans, developed the theme of Soviet causes for the troubles of FRANTIC. The paper called the shuttle operations a "token" exercise.⁴

Two official United States Army Air Force reports on the war offered one somewhat odd theme. The February, 1945 issue called FRANTIC a "significant development in our aid to the Soviet Union," an outright twist of reality, in that the USSR was helping the Army Air Force on AAF request. A November, 1945 version presented a fuller picture of shuttle bombing, noting that it was "cooperation" given by the Soviets "at a critical stage of the air war." This article also credited the shuttle flights with attacks on otherwise inaccessible vital targets in the German war economy. Both booklets carried the signature of General of the Army Henry H. Arnold, Commanding General of the Army Air Forces.⁵ For some reason, the theory that FRANTIC was some sort of militarized helping hand proved to be a persistent part of the literature later penned about Eastern Command. But General Arnold should have known better if anyone did, as he had placed the first U.S. pleas for bases in the dark days of fall, 1943, with the 8th Air Force bombers knocked out of Germany.

Three personal accounts appeared after the war to expand on the few public news stories about the shuttle raids. Major General John R. Deane wrote his memoirs of service in Moscow first, publishing his book in 1947. For his time, Deane delivered an incisive, complete description of the whole program. His perspective on planning,

negotiations, and the integration of shuttle raids into other US/USSR initiatives. To date, Deane's The Strange Alliance still serves as a fine short treatment of FRANTIC. Deane decided that the shuttle missions were of "immeasurable value," citing "eighteen strong attacks" against "important strategic targets in Germany which would otherwise have been immune." John Deane praised the fine cooperation of the Soviet VVS from the air staff down to the women at the runways, though he hinted that a few Russian officials had tried to "sabotage the venture."⁶ Deane's positive judgement must be weighed in light of his assignment as officer in charge of the shuttle program.

General of the Army Henry H. Arnold produced Global Mission in 1949. Arnold bitterly accused the Russians for all of FRANTIC's troubles. He added gratuitous swipes at the Soviet Lend-Lease pilots in Fairbanks, Alaska, then concluded that "the only thing they respect is something that is stronger than they are." The air commander stated that the Soviets did not appreciate the help the United States provided; in fact, he calls them "greedy kids" who were "never satisfied." Arnold's book, steeped in Cold War rhetoric, had nothing good to say about the Eastern Command period, though he did mention that he had been one of the original proponents of shuttle strikes.⁷ H.H. Arnold had swallowed his own rationalization; his book has not a word about his September-October request for Soviet bases to assist the faltering Combined Bomber Offensive. For Arnold, FRANTIC had become just another helping hand bitten by the spiteful Reds.

William Averell Harriman waited the longest to release his version of the shuttle operations. Special Envoy to Churchill and Stalin, released in 1975, gave a generally realistic portrayal of the

Eastern Command experience. Like Deane's book, Harriman's work offered a wider view of the FRANTIC attacks in the context of general U.S./USSR relations. Harriman opined that FRANTIC had been "highly successful" in hitting targets that would have otherwise have been out of range. The former Ambassador still saw eye to eye with his old military assistant after forty years, agreeing with Deane and quoting liberally from The Strange Alliance.⁸

Two official American war histories examined the FRANTIC exercises. Maurice Matloff wrote Strategic Planning for Coalition Warfare for the U.S. Army series. Matloff summarized the value of FRANTIC rather succinctly. He thought that the raids displayed American technical superiority, gave grounds for American/Soviet collaboration, contributed little to wartime strategic efforts, and did not impress the Luftwaffe. Matloff pointed out that most targets were in range, and wisely observed that OVERLORD's move into Normandy was more proof of U.S. resolve than some small air shuttles. Matloff thought that the greatest value lay in the political experience that FRANTIC gave to U.S. negotiators, both military and civilian, in talks with the Soviet Union's leadership. Matloff truthfully remarked that the Soviet consent to the program baffled him, for they got nothing evident from the exchange.⁹

Wesley F. Craven and Jerome L. Cate, in their six volume series The Army Air Forces in World War II, considered FRANTIC at some length. Craven and Cate made selective use of the classified "History of Eastern Command," though much of the actual documentary evidence was still under wraps at the time they wrote (1949-1952). The two historians remarked that responsible circles considered the missions a success. They then point out that, other than creating an isolated

precedent of cooperation, the FRANTIC raids did not seem tremendously effective. Craven and Cate express the belief that the missions might have saved a few men and planes for the USSTAF. In any event, they were certain that the Nazis remained unaffected.¹⁰

In general, American unit histories, personal memoirs, and official volumes gave a mixed verdict on FRANTIC. General Arnold gave the program positive reviews in his 1945 reports then practically omitted it from Global Mission, though he did criticize the Soviet part in the project. Deane and Harriman saw only the good side. The unit and official histories, drawing on the same document base, presented a more balanced picture, though the unit histories gave much more credit to the Soviet Air Force than could military historians writing on government contracts in the 1950s. Only the unpublished, secret (until 1970) internal chronicles gave anything near a true picture.

The Soviet side of FRANTIC was much less fully reported. For one thing, it was closely linked to Stalin, which may have curbed studies into the shuttle program during the explosion of military and political histories of "The Great Patriotic War." Only one of the principals UVS officers involved, the late Colonel General A.V. Nikitin, wrote specifically about FRANTIC. (Marshal A.A. Novikov, the UVS Commander, mentioned the Eastern Command structure only fleetingly in his memoirs.) To be truthful, FRANTIC seemed rather trivial in comparison with the sweeping actions and reactions of the massive Russo-German War. The political sensitivity of the issue could certainly be a factor.

Another definite part of the problem seemed to be the standard Soviet view that the Combined Bomber Offensive contributed little to

the overall results of the war. Drawing on the the published American Strategic Bombing Survey and other available USAAF statistics, Soviet military writers "proved" the absurd claim that the USSR's low-flying VVS aviation nearly single-handedly defeated Hitler's Luftwaffe. While there are fine cases to be made that the CBO fell short of its claims, it certainly did its major work in defeating the Luftwaffe through the cruel tactic of using B-17 bombers as live bait to draw the Nazi fighters out into the guns of American P-51 escorts. Overall, the Americans fought and defeated the bulk of the Luftwaffe, though the VVS did fight a major air war through 1942. The Soviets executed many mental gyrations to obscure that fact. A typical military history article from 1975 ("Flying Fortresses over the Thirzd Reich") resorted to the rather arcane statistic of Luftwaffe reserve bomber crews to prove that the Soviets won the air war. While this propagandizing appeared laughable and a bit pointless, it showed why FRANTIC would not even be a major topic of public discourse.¹¹

Colonel General Nikitin's article appeared in July, 1975, in the Voenno-Istoricheskiy Zhurnal . It was balanced by the previously mentioned "Flying Fortresses" article. Remember, July 1975 featured the Apollo-Soyuz Test Project, the so-called "handshake in space" joint orbital mission. Perhaps Nikitin's posthumous recollections were published in that spirit of detente .

In any event, Nikitin's short remembrance, written before his death in 1973, delivered many parts of the puzzle that previously did not exist. Nikitin listed the names and equipment of the Soviet units involved, and explained how Stalin personally controlled the project. Nikitin fully addressed the 21-22 June, 1944 German air raid, delineating Soviet casualties and the activities of a hapless night

fighter unit. In almost every case, the Nikitin version filled gaps and confirmed many suppositions from "History of Eastern Command," and it even correlated well with previously "Secret" Eastern Command and MAAF papers. The Russian deputy air commander judged the air missions to be a fine example of direct military cooperation. Nikitin proudly records that the Soviets honored all requirements under its agreed obligations. He observed that many official decorations and commendations were exchanged. Finally, Nikitin noted that the joint operations occurred even though the two governments had differing systems, the soldiers on the ground learned to live and work together.¹²

Nikitin's very favorable account of FRANTIC did not denigrate the shuttle effort in the least, and it squarely faced up to the embarrassing German air raid. A twelve volume 1978 official history of the Second World War, Istoriya Vtoroy Mirovoy Voiny, devoted some space to the shuttle missions. The Istoriya presented a summary of the USAAF operations between 2 June and 19 September, 1944. The official volume called FRANTIC the first "neposredstvennogo" (immediate) cooperation of the U.S. and USSR military establishments. The German raid was not mentioned in the page plus of description.¹³

To summarize the official Soviet view, it can best be labelled indifferent but not unkind. For the most part, FRANTIC was a footnote to the "Great Patriotic War." Since the Nikitin article emerged in July, 1975, FRANTIC can be found tucked into most lengthy histories in some form.

What about the Germans? Field Marshal Wilhelm Kretel (Chief of Staff, German Armed Forces) summed up the primary viewpoint at

Wehrmacht headquarters when he labelled the missions a "demonstration, a propoganda stunt." Adolph Galland, Reich Fighter Commander, stated that the 21 June, 1944 Rhuland raid caused some stir in Germany, and he felt that the German Poltava raid did much to damp the effectiveness of the shuttles. Still, Galland saw some virtue in the project. As for America's island allies, the British referred to the operations "more or less as a stunt."¹⁴

Historiography

Only three private works specifically address the shuttle bombing missions in the context of US/USSR relations, though a word or two on FRANTIC fills out many American and recent Soviet works. Two of the histories are American; one is from the Soviet Union.

The shortest consideration is that in M.N. Kozhevnikov's Kommandovaniy i shtab VVS Sovetskoy Armii v Velikoy . In two pages, Kozhevnikov's 1978 work summarizes Nikitin's recollections. Kozhevnikov (who also wrote the article on shuttle operations in the Sovetskaya Voennaya Entsiklopediya) faced the German air raids a bit less candidly than Nikitin, placing the blame on American commanders who allegedly refused to disperse their aircraft (Nikitin stated that the Americans did spread their craft out as much as they could). Kozhevnikov also sniped at the overall American air war, echoing the 1975 "Flying Fortresses" piece with the parting remark that the raids did nothing for the Soviet war effort. Kozhevnikov's work is important because it confirms that the Soviets did suffer heavy losses at Poltava on 21 June, 1944. The author's remarks on the value of FRANTIC were not far different from those of the "History of Eastern

Command."¹⁵

In 1970, Richard C. Lukas addressed shuttle bombing and Eastern Command in his Eagles East. A well-annotated, scholarly work, Eagles East gave a good context for the FRANTIC program, since the book covered Lend-Lease and other military cooperation as well as the Eastern Command raids. Lukas devoted only a single chapter to Eastern Command per se, drawing most of his material directly from the fairly accurate (and by then, declassified) "History of Eastern Command." Lukas agreed with the "History" that shuttles were not of much military value. Also Lukas thought that the missions did create a psychological advantage by demonstrating Allied cooperation.¹⁶ Lukas' work suffered from a lack of Soviet sources, though it seemed that few were available in 1970.

The final, and most often cited, American work on FRANTIC was the 1973 The Poltava Affair by retired Air Force major Glenn B. Infield. This book seemed a polemic, not a history. It was not annotated, so the author's ideas could not always be separated from his sources. Though Infield interviewed many participants, consulted German Air Force records (and Colonel Wilhelm Antrup himself), and checked the Air Force Archives, he ignored any Soviet sources. His book attempted to argue that Stalin sponsored the Soviet attack on Poltava in order to embarrass the U.S. Army Air Forces and get them out of the USSR. This wild line of discussion pervades Infield's book, and unfortunately his skewed effort is currently the only book-length treatment of the shuttle raids. Naturally, Infield considered the FRANTIC program a "disaster" and intimated that, aside from encouraging the destruction of Poltava, Stalin purloined all the American high technology that he could. Infield apologized for all

American failings and indisciplines except that of not being hard enough on the Soviets. The facts were all in Infield's book, but his opinions carry him off into the realms of fantasy and paranoia, not unlike his nemesis Josef Stalin.¹⁷ However, The Poltava Affair remains the sole source for much first-hand information.

All the historiography considered, official, personal, or private, presented a synthesized image of shuttle bombing. Each work considered different purposes for FRANTIC, so the answer to "did it work?" depended on how one defined the goals of "it." Essentially, the view one would gain of FRANTIC from all of these works included the following concepts: the targets were not strategically important, the raids had modest but useful effects, some reduction of loss occurred, cooperative precedents were seen, Eastern Command did the best it could, and the Soviets did/did not keep their side of the bargain (depending on the sources). There are real problems with those ideas. Some are true, some are not. Based on this report's description of the program, it is now time to render a verdict on Eastern Command's activities in the Ukraine.

Goals and Accomplishments

The best compilation of the objectives of FRANTIC, as shown back in Chapter 2 (Figure 3), derived from the proposed "Chapter 12, Conclusions" that did not get into the official secret history of Eastern Command. Most works, including the Eastern Command papers, considered FRANTIC in light of only part of its agenda. Certain significant errors persist in FRANTIC historiography, and a consideration of each of the six objectives must distinguish whose interests were served (if any).

Creation of a precedent for American air forces to use Soviet bases in the USSR became the primary objective of FRANTIC. Obviously, this was an outright failure. Not even an inspection tour came to pass. The United States interest here involved the engagement of the USSR against Japan. The Soviet Union, having back-handed Japan rather handily in 1939, did not fear its Asian neighbors and Stalin never intended to do anything with the Japanese until Hitler was beaten. In this objective, the Soviet Union managed to string the United States along, though the AAF successfully blocked any transfer of heavy bombers to the VVS. Really, the only issue here involved the American persistence. Well into 1945, the U.S. diplomatic community continued to press the issue of Siberian airdromes, even though American B-29s had Chinese and Pacific island bases in full service after June of 1944. The "precedent" concept proved particularly distressing when one regarded that it was used to excuse the maintenance of a useless Ukrainian outpost long after it ceased active service. In essence, Marines and soldiers on Saipan and Chinese coolies accomplished the primary goal of FRANTIC by the time FRANTIC II began. If Pacific bases

were needed, that issue had been solved already by June, 1944 without need to involve the USSR.

The FRANTIC missions created an improvement of communications between the USSR and the United States. The weather agreements and teletype terminal systems fully lived up to their potential. USAAF forces repeatedly penetrated heavy weather conditions using radionavigation equipment, and Soviet and American military forces exchanged intelligence and operational information. On the American side, Major General John R. Deane pressed this successful portion of the FRANTIC program. On the Soviet side, credit belonged to the activities of Lieutenant General Eugene K. Federov and his weather sections.

As for closer cooperation between America and the Soviet Union to improve general relations and troop morale, the results came out mixed. Undeniably, the shuttle project featured the two powers' first and only large-scale combat collaboration. However, the American troops sent to Eastern Command proved a "mongrel" unit, growing increasingly undisciplined as time wore on. The UVS men and women, specially selected for their knowledge and aptitude, held up much better than the bored, unruly G.I.s. When actually conducting combat operations, all was well. However, most of Eastern Command's days consisted of very little once the bases had been finished.

Did the Soviets fulfill their agreements? The answer must be unqualified and positive. The Soviets offered three bases in the north and three in the south; the USAAF officers elected to use only those in the south, which they inspected and chose. Soviet troops built servicable airdromes to American standards, far more lavish than their own primitive fields. The UVS delivered food, shelter, defense (in

accord with their poor capabilities), labor, munitions, and fuel. Marshal Novikov's fine deputy Nikitin personally supervised the program, and Major General Perminov and his men and women received praise in every American primary and secondary source (even the grudging Infield pays tribute). The only Russian failure occurred on 21 June, 1944 during the Poltava air raid, though the high Soviet casualties indicated Perminov's evident concern with trying to rectify matters. UVS assistance dwindled and attitudes hardened only when it became evident that the United States Army Air Forces were no longer serious about continuing the shuttle missions.

Did the Americans fulfill their agreements? The answer here is a weaker yes, with notable exceptions. USAAF shuttles never reached the four per month rate briefed to Stalin. The Americans disagreed with the Soviet takeoff notification rules for flights and often ignored them; then, the AAF pilots complained when the PVO gunners shot at them. American commanders did not keep their troops occupied between shuttle missions, even though training deficiencies and airbase facility upgrades required attention. Incidents grew uglier over time, and included Russian civilian fatalities. On the positive side, the Americans openly showed and provided equipment to the UVS. UVS troops worked on all U.S. planes and learned American radio, supply, repair, intelligence, and navigation methods. On one occasion (Mielec, 25 July, 1944), the USAAF struck a target for the Soviet Air Force. In general, American behavior up until July was excellent; after July, troop morale and proficiency gradually disintegrated.

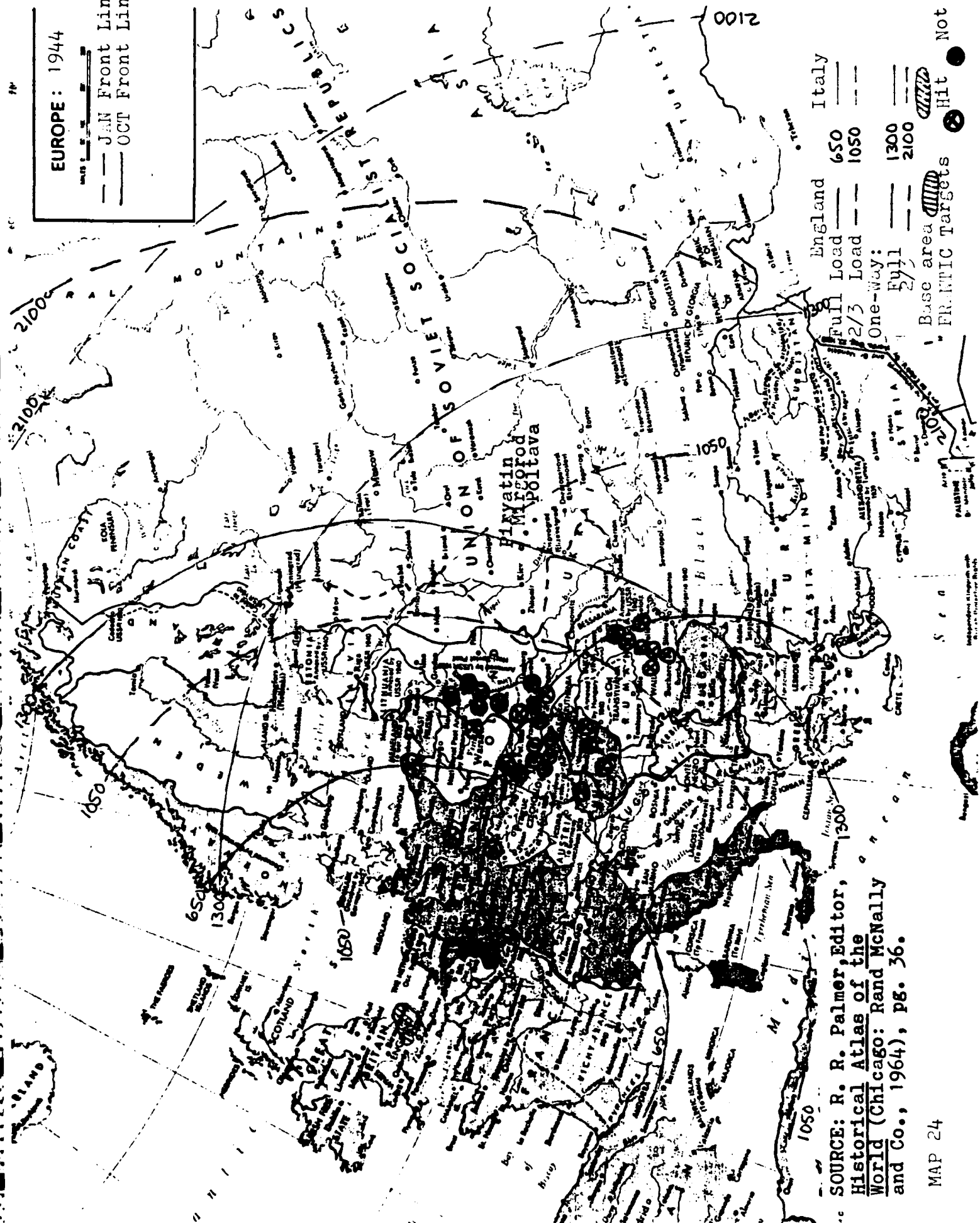
If FRANTIC had ended after FRANTIC JOE (or even after FRANTIC III), it would have been a great success for US/USSR relations. The dogged American insistence on keeping Poltava until June, 1945 and the

equally stubborn Soviet distrust of the U.S. troops without a real mission poisoned any residual good will left over from the summer, 1944. Cooperation, it seemed, deteriorated over time, though Eastern Command disbanded before everything was lost. The fact that FRANTIC led to nothing else of substance indicated that the Soviets were not impressed by what they had seen in the Ukraine.

In the military objectives, shuttle bombing on a cross-continental scale formed the central role for Eastern Command. This ploy, suggested along with many others to help the flagging Combined Bomber Offensive as it lost momentum in late 1943, never really worked very well. For one thing, Soviet bases were not necessary once the 15th Air Force got going in Italy, especially after the ground forces in the east and west began to push forward rather rapidly in the summer of 1944. (Map 24) The 1944 expansion plans for FRANTIC somehow managed to connect three contradictory ideas into one concept for basing at Vinnitsa or Budapest. These schemes stated that the Poltava complex was too exposed to enemy air attack, so it needed reliable U.S. air defenses. Then the argument stated that the three fields lay too far to the east (though the U.S. had selected them, and Germany had not moved since March, 1944). Finally, the American staff officers determined that both the Murmansk and Persian Gulf supply routes had not worked, so they proposed use of the Dardanelles/Black Sea route. (Neutral Turkey was not consulted.) These ideas represented plans to save an essentially useless tactic. Only one other major shuttle had been tried (in August, 1943 to North Africa), and the Army Air Force found itself stuck to an unprofitable experiment that it could not escape. This was because the unnecessary Pacific option allegedly had to be maintained. Even that did not stop the October

EUROPE: 1944

— JAN Front Line
— OCT Front Line



Italy	Full Load	650
England	2/3 Load	1050
France	One-way	1300
Base area	Full	2100
FRANTIC Targets	Hit	Not Hit

drawdown and end of active shuttle flights. Shuttle bombing in general proved an expensive failure, remedied only by the small size of the AAF forces committed.

American losses on FRANTIC missions were significantly higher than on normal strategic missions. The FRANTIC bombers and fighters that received battle damage or broke down did not come home quickly at all. Shuttle craft only ran one real mission using repaired planes (29 July, 1944). Stranded flight crews, their planes ruled unrepairable, had to wait for the weekly Teheran flights and then follow circuitous routes back to their units. Most American and Soviet sources did not even consider this serious side effect of shuttle operations. As Table 1 shows, U.S. losses/ left back exceeded those claimed against the Luftwaffe. The usual FRANTIC literature explained that shuttles sustained reduced losses; this simply was not so.

As for more raids during the winter, the realities of Ukrainian climatic conditions quelled any USAAF hopes in that direction. In fact, active FRANTIC raids were not even tried in the winter. The same bad weather that encouraged General George Marshall to recommend against VELVET was referenced again when the time came to decommission Mingorod and Pinyatin. However, Major General Barney Giles had listed winter weather in the USSR as an advantage in his September, 1943 memorandum about shuttle bases in the USSR. Eastern Command's contraction made the point moot.

FRANTIC intended to permit the delivery of heavier bombloads with less fuel. Instead, the USAAF shuttle units carried almost a third less bomb payload than normal round-trip missions. Fuel usage figures were not available, but the lesser bombing tonnage surely obviated this supposed benefit.

TABLE 1

US/German Aircraft Losses: FRANTIC Operations

B= B-17 Bombers; F= P-51 or P-38 Fighters

Mission Title	US Launched	US Aborts	US Lost/ Left Back*	US Returned to home	Germans Claimed**	% of US Not Returned
<u>JOE</u>	130 B, 69 F	5 F	8 B, 12 F	122 B, 52 F	13 F	10 %
<u>II</u>	163 B, 70 F	20 B, 5 F	72 B, 7 F	71 B, 58 F	2 B, 7 F	34 %
<u>III</u>	135 F	16 F	9 F	110 F	120 F#	7 %
<u>IV</u>	89 F	11 F	24 F	54 F	5 F##	27 %
<u>V</u>	78 B, 64 F	2 B	1 B, 10 F	75 B, 54 F	5 F	8 %
<u>VI</u>	75 B, 64 F	0	1 B, 3 F	74 B, 61 F	0	3 %
<u>VII</u>	110 B, 73 F	3 B, 2 F	14 B, 16 F	93 B, 55 F	8 F	16 %
Fighters	564	39	81	444	158	
Bombers	556	25	96	435	2	
TOTALS	1120	64	177	879	160	

* Includes aircraft left in USSR due to unrepaired battle damage and mechanical failures; these aircraft returned only once (29 July 1944) as an organized mission, so they can be considered as "lost" for any immediate use by the operational groups. See Appendix Five for further details.

** German aircraft "probables" and "damaged" have been deleted. See Appendix Five for details on aircraft claims.

56 on the ground, 64 in the air.

4 on the ground, 3 in the air.

@Includes 2 He-111 destroyed by Soviet air defenses on 22 June, 1944.

§One P-51 fighter left by a previous mission returned with this flight; it has been deleted from the totals to avoid skewing the figures.

Note: Losses over ten percent were considered very serious.

SOURCES: Robert L. Walsh, "Eastern Command Fact Book," in Glenn B. Infield, The Poltava Affair (New York: Macmillan and Co., Inc., 1973), pp. 241-245; Heinrich Hoffer, "A Lesson in Security," in Headquarters, U.S. Army Air Forces, Mediterranean Theater of Operations, Intelligence Section, Defeated (Washington, D.C.: Headquarters, Army Air Forces, 1946), pg. 69.

Table 2 summarizes the failure of the shuttle concept in 1944. Even without the Poltava aircraft casualties, FRANTIC strikes suffered four times the losses of other raids. They delivered a third less bomb tonnage, none of it in the winter. In fact, as Chapter 3 demonstrated, summer weather delayed many planned FRANTIC operations. So far as shuttling had been designed to cut the aircraft toll over Europe, the concept failed.

In the fifth FRANTIC objective, the USAAF tried to conduct strategic bombing from the USSR, striking POINTBLANK targets. Every FRANTIC target, including those designated for fighter sweeps, fell directly under the Combined Bomber Offensive's priorities. The prevalent argument (found even in "History of the Eastern Command") that the Soviets picked all the targets and few were strategic is quite false. The FRANTIC target array represented American choices, even the Debrecen raid on 2 June, 1944.¹⁸ (Remember, the Soviets recommended the favorite Ploesti refineries when Deane asked for a FRANTIC JOE target; Spaatz and Eaker selected Debrecen.) The 25 July, 1944 fighter sweep over Mielec, Poland answered a Soviet request, but Mielec was also an Eastern Command priority target. So the FRANTIC strikes did in fact aim at strategic locations, by the definition of the JOCKEY committee and the CBO.

Map 24 showed that the addition of 15th Air Force covered occupied Europe quite effectively by January, 1944. This coverage grew better and better as Allied armies closed on the German Reich from all sides. Most of the Eastern Command's priority one targets were captured by Soviet Army forces before the slow-paced shuttle units attacked these facilities. Of twenty Eastern Command targets, only five were eventually engaged (one twice). (Map 25) Of those five, one

TABLE 2

FRANTIC Operations in Perspective

Comparative Consideration	FRANTIC 8th AF	Total 8th AF	FRANTIC 15th AF	Total 15th AF	FRANTIC Project	USSTAF Combined
<u>Sorties</u>						
Bomber Sorties	763	348,994	371	152,542	1134	501,536
% of AF Total	.002	100	.002	100	.002	100
Fighter Sorties	559	270,364	650	89,835	1209	360,199
% of AF Total	.002	100	.007	100	.003	100
Total Sorties	1322	619,358	1021	242,377	2343	861,735
% of AF Total	.002	100	.004	100	.003	100
Bomb Tonnage	1227	692,918	691.9	312,173	1918.9	11,005,091
% of AF Total	.002	100	.002	100	.002	100
Bomber Losses	88	5945	8	2380	96	8325
% of AF Total	.01	100	.003	100	.01	100
Fighter Losses	36	3112	45	1030	81	4142
% of AF Total	.01	100	.04	100	.02	100
Total Losses	124	9057	53	3410	177	12467
% of AF Total	.01	100	.01	100	.01	100
Average Bomb Tons per Sortie	.9	1.1	.7	1.3	.8	1.2
Average Losses per Sortie	.09	.01	.05	.01	.07	.01
Average Losses per Sortie w/o Poltava Losses	.04	.01	.05	.01	.04	.01

Notes :

Sorties : Not to be confused with the number of aircraft that went to the USSR in each FRANTIC rotation, but each mission launch against a target per plane. The Air Force defined a sortie as one combat flight by one aircraft on one mission. A typical FRANTIC mission might bomb up to four targets, allowing up to four sorties per plane on a single FRANTIC deployment.

Bomb Tonnage : This represents the amount of bombs dropped on primary targets. Appendix Six explains more fully that few of these bombs actually damaged the targets attacked.

Losses : The figures shown depict all aircraft lost or left behind as unrepairable in the USSR. Appendix Five elucidates the methods used to fix these numbers.

Average Bomb Tons per Sortie : Using the total number of sorties, this represents the typical weight of bombs delivered for each flight. Given in tons, it includes bombless fighter escorts, which were necessary to conduct raids but added nothing to tonnage totals. Strafing missions by fighters are added to both the Air Force and FRANTIC totals.

Average Losses per Sortie : Predicated upon the total number of sorties, this number shows how many planes per sortie would be lost on an average mission. The higher the number, the greater the losses inflicted.

Average Losses per Sortie w/o Poltava Losses : This figure depicts the loss rate per sortie if the Poltava air raid losses had not occurred.

SOURCES: All previous figures and tables, plus United States Strategic Bombing Survey, Statistical Appendix to Overall Report (European War) (Washington, D.C.: United States Government Printing Office, 1947), pp. 1-2.

SOURCE: Lester A. Sobel, Editor,
Maps on File (New York:
Facts on File, Inc., 1982)
 pg. 0.004

MAP 25

EASTERN EUROPE, October 1944

The Front Moves Past FRANTIC

— Front Line



● FRANTIC Targets (Priority)

⊗ Priority Targets Bombed



was the Warsaw supply drop and two were fighter strafing runs. Buzau, Rumania was bombed as well as strafed, and oil installations at Drohobycz and Trzebinia were hit. Weather, 8th and 15th Air Force requirements, and missions outside the Combined Bomber Offensive (like carpet bombings in July, 1944 in support of western Allied operations in Normandy) combined to undermine the Eastern Command target system. Eastern Command did not help itself much, as it conducted an increasingly ineffective and disorganized intelligence effort.

Bombing effectiveness on FRANTIC proved rather average. (Table 3) By and large, the shuttle forces employed bombs that were much too small for their intended targets. Accuracy compared favorably with other visual missions in the Combined Bomber Offensive. The only extremely effective raid occurred on 11 September, 1944 at Chemnitz, when a small number of heavy incendiary bombs gutted a key German tank engine factory.

The Luftwaffe did not have to shift assets to address FRANTIC; in fact, German Air Force Intelligence documents did not even mention the small shuttle forces after June, 1944. German aircraft totals east and west did not differ much from 6 June until 22 June, 1944, the time of crisis in northern France.¹⁹ FRANTIC turned out to be too late to help the D-Day operation on 6 June, 1944. The length of time that transpired between September of 1943 to June of 1944 hurt any ability to affect the Normandy invasion directly. Much of the time delay was due to the slow pace of US/USSR negotiations, but the AAF's slowness in designing and moving the necessary supply materials also played a critical part.

The most depressing part of strategic bombing involved the rather uncertain image projected by USSTAF bomber and fighter units and the

TABLE 3

USAAF Bombing Effectiveness: FRANTIC Operations

Bombing Performance

Mission	Target	Single Aircraft Bombload	Bomb Tonnage Dropped	Bomb Tonnage On Target	Effects on Target
JOE	Debrecen	4000	257.5	18.5	All tracks cut; 1200 cars wrecked
JOE	Galati	4000 *	154.3	4.4+	12-14 enemy planes destroyed; 2 large fires
JOE	Focsani	4000 *	178	2.9	Weight of raid missed airfield
II	Rhuland	4000 *	194.3	25.0	14 % of monthly production lost
II	Drohobycz	4000	140.6	18.1	19 % of monthly production lost
V	Rahmel	3000	111.5	7.8	Unknown
V	Trzebinia	4000	103.5	13.4	18 % of monthly production lost
V	Buzau/ Zilistea	4000 4000	65.8 90.4	1.9 3.2	Unknown Limited damage
VI	Chemnitz	5000 *	116.8	5.5 +	146 % production loss; 12787 tank engines lost.
VI	Diosgyor	4000	146	5.9	Unknown
VII #	Szolnok	4000	184	11	Unknown
TOTAL	---	---	1742	117.6	

* 100 incendiary bomb tonnage not included; Chemnitz raid featured 500 pound incendiaries.

** There were also fighter sweeps that did not include bombing but did inflict and suffer losses added into Table 1 totals.

A supply drop on Warsaw also occurred with fair results.

+ Effective incendiary bombing.

SOURCE: Summarized from previous figures.

service troops of Eastern Command. To VVS troops and officers, accustomed to daily missions as long as the propellers turned over, used to grass airstrips and little comfort, the Americans must have seemed unimpressive. The USSTAF concern with weather (the VVS flew under it), the AAF service troops' concern with comfort and free time (neither had a priority in the Red Air Force), and especially the indisciplines of American flying procedures and behavior must have looked rather inefficient. VVS units fought or worked; they would never waste time playing baseball when there was work waiting. To a Soviet general or private, it no doubt appeared that the USAAF was busy doing nothing.

In the final FRANTIC objective, some tactical support was given to the Soviet ground armies as they advanced in the Balkans. Both German sources and the frosty General A.A. Antonov agreed that the bombers and fighters aided the Soviet advance.²⁰ The effects were not great, but it was a positive area often overlooked in evaluating the shuttle program. Here was a case of actual United States aid to their Soviet allies.

Overall, FRANTIC deployed seven combat task forces, plus numerous photographic reconnaissance flights. (Figure 36) Five bombing forces operated, with three rated effective and two rated ineffective due to losses. Two fighter forces went to the USSR; the first did well, the second did not. The net of all this was four effective missions and three ineffective missions. In a military sense, the only positive aspect of FRANTIC involved its small scale. At least only a few American resources were wasted on these exercises.

Figure 37 summarizes FRANTIC as a whole. In general, the United States did not accomplish anything that lasted much past the end of

Figure 36

Summarized Mission Ratings: FRANTIC

<u>Mission</u>	<u>Type</u>	<u>Results</u>	<u>Rating</u>
JOE	Bombing	10% losses, 4% bombs on target	EFFECTIVE
II	Bombing	34% losses, 13% bombs on target	INEFFECTIVE
III	Fighter	7% losses	EFFECTIVE
IV	Fighter	27% losses	INEFFECTIVE
V	Bombing	7 % losses, 7% bombs on target	EFFECTIVE
VI	Bombing	2 % losses, 4% bombs on target	EFFECTIVE
VII	Bombing	16 % losses, 6% bombs on target	INEFFECTIVE

Ratings are based on U.S. loss rate, bombing effects, and enemy loss rate for each mission.

SOURCE: All previous tables and figures.

Figure 37

FRANTIC Objectives

#1. Establish precedent for American forces operating from Soviet territory with the aim of obtaining air bases later from which to bomb Japan.

RESULT: NOT SUCCESSFUL

#2. Improve communications between the USA/USSR.

RESULT: SUCCESSFUL

#3. Closer cooperation between USA/USSR to improve general relations and troop morale.

RESULT: QUALIFIED SUCCESS

#4. Shuttle-bombing on a cross-continental basis; tactical advantages for the USAAF:

a. Reduce American aircraft losses.

RESULT: NOT SUCCESSFUL

b. Allow more raids in winter months by offering another flight origin site besides England or Italy.

RESULT: NOT ATTEMPTED

c. Deliver heavier bombloads with less fuel usage.

RESULT: NOT SUCCESSFUL

OVERALL RESULT: NOT SUCCESSFUL

#5. Strategic bombing on the Russian front; strategic advantages for the USAAF:

a. Strike POINTBLANK targets that could not otherwise be bombed, especially oil facilities.

RESULT: FAULTY PREMISE; ALL AVAILABLE TARGETS ALREADY IN RANGE

b. Force the German Luftwaffe to shift assets to the east before start of OVERLORD (Normandy invasion, 6 June, 1944).

RESULT: NOT SUCCESSFUL

OVERALL RESULT: NOT SUCCESSFUL

#6. Provide tactical support for USSR operation

RESULT: QUALIFIED SUCCESS

SOURCE: "Summaries, Chapter 12, Conclusions," 1944, USAF Historical Research Center, Record 522.057-1, Maxwell AFB, Alabama.

the war, nor did US/USSR relations take any major shifts because of the mission. In a sense, it probably added to tensions, especially by the end. However, it did provide an example of collaboration, however ineffective.

Did the USSR get anything out of FRANTIC that they did not already have? No, except for some unexpected tactical aid in conquering the Balkans, the USSR gained nothing more than the Americans. With less in resources than America and a hostile German Army on its soil in 1944, one cannot imagine why Stalin assented to FRANTIC. Like the Americans, Stalin took home only losses and ephemeral propaganda from the missions.

The FRANTIC project seemed like a good idea. It turned out to be something quite different. In effect, it gave the United States of America and the Union of Soviet Socialist Republics an opportunity to cooperate against a common enemy. But the Nazis, for all their Luftwaffe and Heer, proved less an enemy than the powerful impetus of mutual suspicion.

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CHAPTER 4

Notes

1. "History of Eastern Command, Chapter III, Combat Operations," pp. 4, 8-9.
2. Ibid., pp. 26, 32-39; "History of Eastern Command, Chapter I, Strategy and Mission," pg. 39; "History of Eastern Command, Chapter V, Personnel," pp. 54-58, 104, 112, 139; "History of Eastern Command, Chapter VIII, Politics," pp. 84-88, 92-99.
3. "Summaries, Chapter 12, Conclusions," para. 4, 12, 34, 45.
4. "Operational Factors, Eastern Command Bases"; "MAAF History of FRANTIC," pg. 1; "Relations and Continuity of Air Operations from Bases in Russia."
5. General Henry H. Arnold, Second Report of the Commanding General of the Army Air Forces to the Secretary of War (Washington, D.C.: Headquarters, Army Air Forces, 27 February, 1945), pg. 38; General Henry H. Arnold, Third Report of the Commanding General of the Army Air Forces to the Secretary of War (Washington, D.C.: Headquarters, Army Air Forces, 12 November, 1945), pg. 29.
6. Deane, The Strange Alliance, pg. 124.
7. Arnold, Global Mission, pp. 306-307, 470-471, 589.
8. Harriman and Abel, Special Envoy to Churchill and Stalin, pg. 341.
9. Matloff, Strategic Planning for Coalition Warfare 1943-1944, pp. 498-499.
10. Craven and Cate, Europe: Argument to V-E Day, pg. 318.
11. See Appendix Seven for further information; United States Strategic Bombing Survey, European War: Overall Report, Book 2 (Washington, D.C.: U.S. Govt. Printing Office, 30 September, 1945), pg. 17; A. Orlov and N. Komarov, "Flying Fortresses over the Third Reich," Soviet Military Review 7, July, 1975, pp. 51-52; Von Hardesty, Red Phoenix (Washington, D.C.: Smithsonian Institution Press, 1982) pp. 202-203.
12. Nikitin, "'Chelnochnye' operatsiy," pp. 41, 46.
13. Semiryaga and Shinkarev, Osvobozhdenie territorii CCCP i evropeyskikh stran: vojna na tikhom okeane i v azii, pp. 511-512.
14. Craven and Cate, Europe: Argument to V-E Day, pg. 318; "FRANTIC History: Negotiation and Planning"; "History of Eastern Command, Chapter I, Strategy and Mission," pg. 22; Galland, The First and the Last, pp. 283-284.
15. M.N. Kozhevnikov, Komandovaniy i shtab VVS Sovetskoy Armii v Velikoy (Moscow: Izdatelstvo Nauka, 1978), pp. 190-191.
16. Lukas, Eagles East, pp. 200-201.
17. Infield, The Poltava Affair, pp. 226-240.
18. "History of Eastern Command, Chapter III, Combat Operations," pp. 14-16.
19. Ibid., pp. 20-21; See also Appendix Seven, Table 8.
20. "History of Eastern Command, Chapter III, Combat Operations," pp. 20-21.

APPENDIX ONE

GLOSSARY OF ACRONYMS AND CODEWORDS

- ABON - Aviatsionuyu bazu osobogo naznacheniya; Air Base Special Task Force.
- ARGUMENT - Code word for a February, 1944 program to concentrate Allied bombers and fighters to destroy the German Air Force.
- BAGRATION - Name bestowed on the Soviet Army's summer offensive for 1944. The objective was the destruction of German Army Group Center and the liberation of Belorussia.
- BARBAROSSA - Name given to the German plan for the initial invasion of the USSR, June, 1941.
- Base 559 - Poltava, a bomber field and Eastern Command Headquarters.
- Base 560 - Pinyatin, the fighter field.
- Base 561 - Mirgorod, a bomber field.
- BASEBALL - Original code title for US/USSR shuttle bombing concept.
- BAZAAR - Cover name for a proposed survey of Siberian airfields by Major General Follett Bradley in 1942.
- BLAU - German plan to seize the Caucasus oil fields during the summer of 1942. This plan resulted in the Stalingrad debacle.
- CBO - Combined Bomber Offensive; the use of the British and American bomber fleets to destroy the German economy.
- D-Day - In military terms, the unspecified date for execution of a plan under formulation (the dates are filled in later). In common usage, the invasion of Northern France on 6 June, 1944 by the Western Allies.
- Detachment 5 - The cover name for Eastern Command personnel until 10 April, 1944.
- EXPLORATION- A code name for the Army Air Force Siberian basing idea.
- FRANTIC - The shuttle bombing program using bases in the USSR.
- GLACIER - A code name for the Army Air Force Siberian basing idea.
- Gosplan - The Soviet State Planning Commission; it handled war industries and production.
- HALPRO - The Halverson Project, which originally intended to bomb Japan from China. HALPRO actually attacked Floesti,

- Rumania.
- Heer - The German Army.
- IAD - Istrebitelnaya Aviatsionnaya Diviziya; Fighter Aviation Division.
- Jockey - The team that designated the target priorities for the Combined Bomber Offensive.
- JCS - Joint Chiefs of Staff; the United States service chiefs.
- Lend-Lease - The U.S. program to provide American war materials to allied powers without monetary charge.
- Luftwaffe - Literally, "air weapon"; the German Air Force.
- MAAF - Mediterranean Allied Air Forces.
- MARKET-GARDEN - A western front operation involving the use of three divisions of paratroopers; September, 1944.
- NKVD - Narodny Komissariat Vnutrennikh Del; The Soviet secret police and intelligence service.
- NIP - Nochnaya Istrebitelnaya Polk (NIP); Night fighter Regiment.
- Oil Plan - The specific phase of the Combined Bomber Offensive underway throughout the active phase of FRANTIC. As one would guess, petroleum refining was the priority target.
- OSS - Office of Strategic Services; the American intelligence agency.
- OVERLORD - Code name for the Normandy Invasion.
- POINTBLANK - The code name for the Combined Bomber Offensive.
- PVO - Protivovodushnaya Oborony; Air Defense Forces.
- Stavka - The inner circle that directly advised Stalin on military matters.
- TIDAL WAVE - 1 August, 1943 low-altitude raid on Ploesti.
- URANUS - The November, 1942 Soviet Army counteroffensive against the German forces around Stalingrad.
- USAAF - United States Army Air Force; not yet a separate service in World War II, but semi-independent
- USSBS - United States Strategic Bombing Survey; a team that used on-site inspections, American military records, and German production data to produce an exhaustive,

detailed study of the effects of American bombing.

- USSTAF - United States Strategic Air Forces, which controlled the operations of the English (8th Air Force) and Italian (15th Air Force) under the Combined Bomber Offensive
- VELVET - British/American proposal to place an air force in the Caucasus in 1942.
- VNOS - Vozdushnogo Nablyudeniya Onoveshcheniya i Suyazi; Aerial Observer Early Warning Signallers; a sky watch force to report on enemy aircraft movements.
- VVS - Voenno Vozdushnie Sily; The Soviet Air Force.

APPENDIX TWO, Annex One

TABLE 4

Bomber Aircraft Performance

Aircraft	B-17G	Pe-8*	He-111 H-6	Ju-88 A-1	He-177 A-5
<u>Nationality</u>	USA	USSR	Germany	Germany	Germany
<u>Crew</u>	10	11	5	4	6
<u>Armament</u>	13 x 12.7mm; 3 x power turrets	2 x 7.62mm; 12 x 12.7mm; 2 x 20mm	5 x 7.92mm 1 x 20mm	4 x 7.92mm	3 x 13.1 mm; 4 x 7.92mm; 2 x 20mm; 2 x power turrets
<u>Bombload (lbs)</u>	6000	8800	4400	3300	13200**
<u>Gross Weight</u>	56500	51040	27400	22840	68343
<u>Horsepower X engines</u>	1200 x 4	1350 x 4	1340 x 2	1200 x 2	2950 x 2
<u>Horsepower to Weight</u>	.08	.11	.10	.10	.09
<u>Wing Loading</u>	39.8	49.6	29.1	38.7	62.3
<u>Maximum Speed</u>	299	252	258	310	303
<u>Combat Ceiling</u>	25000	25000	16400	20000	20000
<u>Maximum Ceiling</u>	37500	26246	25500	26250	26250
<u>Range</u>	1300#	2796	760	620	3400
<u>Remarks</u>		Only 79 built			Innovative but failed design; engines often caught fire

* Also referred to as the TB-7.

** Utilized for photographic reconnaissance at Poltava.

Could be extended to 2100 miles by reducing bombload to 4000 lbs.

SOURCES: William Green, Famous Bombers of the Second World War (Garden City, New York: Doubleday and Company, Inc., 1975), pp. 20 (He-111), 53 (B-17), 192 (Ju-88), 231 (He-177); V. B. Shavrov,

Istoriya Konstruktsiy Samoletov v SSSR 1938-1950 G.G. (Moscow:
Mashinostroenie Publishing House, 1978), pg. 147 (Pe-8).

APPENDIX TWO, Annex Two

TABLE 5

Fighter Aircraft Performance

Aircraft	P-51D	P-38J*	Yak 7b	Yak 9D	P-39D	FW-190 A8
<u>Nationality</u>	USA	USA	USSR	USSR	USSR	Germany
<u>Crew</u>	1	1	1	1	1	1
<u>Armament</u>	6x 12.7mm;	4 x 12.7mm; 1 x 20 mm	2 x 12.7mm; 1 x 20mm	2 x 12.7mm; 1 x 20mm	4 x 7.62mm; 4 x 12.7mm; 1 x 37mm	2 x 13.1mm; 4 x 20mm
<u>Bombload (lbs)</u>		2000				
<u>Gross Weight</u>	10100	17500	6688	6853	7600	9424
<u>Horsepower x engines</u>	1695 x 1	1425 x 2	1180 x 1	1180 x 1	1140 x 1	1700 x 1
<u>Horsepower to Weight</u>	.17	.16	.17	.17	.15	.18
<u>Wing Loading</u>	42.9	53.4	36.2	37.1	35.0	47.8
<u>Maximum Speed</u>	488	414	354	373	360	405
<u>Combat Ceiling</u>	30000	25000	10170	10170	5000	20500
<u>Maximum Ceiling</u>	42000	39000	32479	32808	32100	37400
<u>Range</u>	1650	1880	510	826	600	500
<u>Remarks</u>			Wood and fabric wings	Wood and fabric wings	USA design; sent under Lend- Lease	Best East Front Ger- man Fighter

* The F-5 version replaced weapons with aerial photographic equipment.

SOURCES: William Green and Gordon Swanborough The World's Great Fighter Aircraft (New York: Crescent Books, 1978), pp. 122 (P-38), 129 (FW-190), 140 (P51); V. B. Shavrov, Istoriya Konstruktsiy

Samoletov v SSSR 1938-1950 G.G. (Moscow: Mashinostroenie Publishing House, 1978), pp. 188 and 192 (Yak-7b), 188 and 195 (Yak 9D); P-39 data from Albert A. Nofi, "The War in the Pacific, 1941-1943," Strategy and Tactics , 29 (November 1971): 26.

APPENDIX TWO, Annex Three

TABLE 6

Night Fighter Aircraft Performance

Aircraft	P-61B	Pe-3	He-219 A-7
<u>Nationality</u>	USA	USSR	Germany
<u>Crew</u>	3	2	2
<u>Armament</u>	4 x 12.7mm; 4 x 20 mm	12 x 7.62mm; 13 x 12.7mm; 12 x 20 mm	2 x 20 mm; 6 x 30mm
<u>Bombload (lbs)</u>			
<u>Gross Weight</u>	29700	17688	33730
<u>Horsepower x engines</u>	1850 x 2	1100 x 2	1900 x 2
<u>Horsepower to Weight</u>	.12	.12	.11
<u>Wing Loading</u>	44.8	62.6	70.4
<u>Maximum Speed</u>	375	329	416
<u>Combat Ceiling</u>	20000	20670	22965
<u>Maximum Ceiling</u>	35000	29855	41660
<u>Range</u>	610	932	1243
<u>Remarks</u>	Radar on board	Some models with radar*	Radar on board#

* Soviet sources do not discuss radar on the Pe-3. These sources credit the Pe-3 with radar on board: Russell Miller, The Soviet Air Force at War (Alexandria, Virginia: Time-Life Books, 1983), pg. 131; Von Hardesty, Red Phoenix (Washington, D.C.: Smithsonian Institution Press, 1982), pg. 255. These sources state that the Pe-3 had no radar capacity: Asher Lee, "Strategic Air Defense," in The Soviet Air and Rocket Forces (New York: Frederick A. Praeger, Publishers, 1967).

pg. 119; Robert Jackson, The Red Falcons (Brighton, England: Clifton Books, 1970), pg. 142; Robert A. Kilmary, A History of Soviet Air Power (New York: Frederick A. Praeger, Publishers, 1962), pp. 197-198. Some capability is presumed.

#Included for the sake of comparison; no He-219s served on the Eastern Front.

SOURCES: William Green and Gordon Swanborough The World's Great Fighter Aircraft (New York: Crescent Books, 1978), pp. 156-157 (P-61B); V. B. Shavrov, Istoriya Konstruktsiy Samoletov v SSSR 1938-1950 G.G. (Moscow: Mashinostroenie Publishing House, 1978), pp. 151 and 155 (Pe-3); Martin C. Windrow, German Air Force Fighters of World War Two, Volume Two (Garden City, New York: Doubleday and Company, Inc., 1970), pg. 38 (He-219).

APPENDIX TWO

Notes on Aircraft Performance Data

Aircraft : The standard military model number is used. American aircraft models are shown as "B" (Bomber), "P" (Fighter, originally from the term "pursuit"), "F" (Photographic Reconnaissance), followed by the model number and modification letter (i.e. "P-51D", a fighter, model 51, D version). Russian aircraft are named after the first two or three letters in the last names of their aviation design bureau chiefs ("Yak"- V. F. Yakovlev, "Pe"- V. M. Petlyakov), followed by the model number and modification letter. German aircraft are designated by a two-letter abbreviation of their manufacturing company's name ("He"- Heinkel, "Ju"- Junkers, "FW"- Focke-Wulf), then the model number and modification letter/number.

Nationality : Self explanatory.

Crew : This is the number of fliers needed to operate the plane. Some of the larger bombers could carry extra men as passengers.

Armament : These weapons were split into two types: machineguns firing solid slugs (7.62mm, 7.92 mm, 12.7 mm, 13.1 mm), and rapid firing cannons shooting exploding shells (20 mm, 30 mm, 37 mm). Fighter guns were usually fixed in the wings or forward fuselage. Bomber weapons were in flexible mounts for self-defense. Some bombers had power turrets with pairs of guns.

Bombload : Given in pounds, this is the weight of ordnance that a given plane can carry to a target. Although bombs can be rigged on almost any aircraft, those shown with bombload figures carried the necessary optical aiming devices for accurate bomb delivery.

Gross Weight : Listed in pounds, this number represents the mass of a fully fuelled, armed, and crewed airplane at mission take-off time.

Horsepower X engines : This figure shows the amount of horsepower generated by each engine, as well as the number of aircraft engines.

Horsepower to Weight : This ratio shows how much horsepower is available to push each pound of plane through the air. Planes with higher numbers have more motive thrust for rapid climbs to altitude and greater speed in level flight. Lower numbers here show a more sluggish aircraft.

Wing Loading : Another performance indicator, wing loading is derived by dividing the gross weight by the total wing area (in square feet). The result shows how many pounds of airplane each square foot of wing must lift. In this case, low figures indicate a more nimble aircraft, particularly at lower altitudes where the air is denser. High figures mean that the plane will be sluggish at lower ceilings, but may well outperform a low-wing-loading plane above 20,000 feet.

Maximum Speed : In miles per hour, this represents the maximum forward speed of the aircraft in level flight. It can be exceeded (at risk to the airframe and pilot) in a dive.

Combat Ceiling : Given in feet, this is the altitude at which the plane is designed to operate. An aircraft operating at combat ceiling can achieve its best speed and optimum maneuverability. Below this altitude, the airplane will be a bit slower and less lively. Above this height, the plane loses speed and turning ability.

Maximum Ceiling : Listed in feet, this is the highest that the plane can fly. Sometimes called the "stall altitude," since aircraft that cannot go any higher literally hang up in mid air, then nose over in a dive (if the pilot is competent).

Range : Shown in statute miles, this is the farthest the aircraft can fly on its onboard fuel, including add-on under-wing and bomb-bay tanks, if applicable. Dividing range in half yields "radius," which is how far a plane can fly out to fight and then return to home base. Any aerial conflict enroute burns fuel and contracts the combat radius.

Remarks : Self-explanatory.

General comments : Aircraft statistics can be misleading, but a few basic rules can aid in interpretation. First of all, the more engines, weapons, bombs, and fuel aboard, the less active the plane will be in flight. Single engine fighters were more maneuverable than twin engine fighters or bombers. A plane with high horsepower to weight and low wing loading (like the Yak 7b) would tend to be a great low altitude performer, so it is no surprise that its combat ceiling is 10,170 feet. A plane with high horsepower to weight and high wing loading was built for power dives and high altitude fighting (such as the P-51D or FW-190 A-8). These planes were overall the most effective, as a fast pass after diving down from an upper altitude was (and remains) the most reliable method of gaining a tactical advantage on opponents. Planes with low horsepower to weight and high wing loading were usually special purpose twin-engine planes, like night fighters (as the P-61B or the Pe-3). This aircraft type excelled against ponderous, relatively unmaneuverable targets, like bomber formations or other night fighters. Finally, aircraft with low horsepower to weight ratios and low wing loading were maneuverable but not capable of high speeds, like the He-111 and Ju-88.

SOURCES: Edward H. Sims, Fighter Tactics and Strategy 1914-1970 (New York: Harper and Row, 1972), pp. 18-20, 248.

APPENDIX TWO, Annex Four

TABLE 7

Antiaircraft Gun Performance

Weapon	M1939	KS-18	DShK	M-1	M-2
<u>Nationality</u>	USSR	USSR	USSR	USA	USA
<u>Type</u>	37mm Auto	85mm	12.7mm Auto	37mm Auto	90mm
<u>Ceiling</u>	4505	34450	6562	18600	39500
<u>Elevation</u>	85	82	90	90	80
<u>Traverse</u>	360	360	360	360	360
<u>Rate of Fire</u>	80**	25	70#	120	-- *

* No data available; depends on capacity of crew.

** 180 rounds per minute for short periods.

550 rounds per minute for short periods.

SOURCES: Sovetskaya Voennaya Entsiklopediya, 1977 ed., s.v. "Zenitnaya Pushka," by A.N. Latukhin, pp. 455-456; Sovetskaya Voennaya Entsiklopediya, 1977 ed., s.v. "Zenitny Pulemet," by Zenitnaya Pulemetnaya Ustanovka, pp. 459-460; Peter Chamberlain and Terry Gander, Antiaircraft Guns (New York: Arco Publishing Company, Inc., 1975), pp. 54, 58, 60-63.

APPENDIX TWO
Notes on Antiaircraft Gun Performance

Weapon : The military model number and /or letter assigned to the gun by the using force.

Nationality : Self Explanatory.

Type : There were two types of guns: machineguns with non-exploding slug rounds (DSHK 12.7 mm) and cannons with fused rounds (37 mm, 85 mm, 90 mm). "Auto" weapons were fed by drum, belt, or feed box that permitted a continuous firing cycle as long as the ammunition lasted. Russian weapons fired high explosive-time fuse and fragmentation rounds. American guns fired these same projectiles, plus the exotic "proximity" fused shells, which emitted radio signals that reflected back as they approached their target, allowing precision bursts at a pre-set distance for maximum shrapnel effects.

Ceiling : Listed in feet, this was highest altitude at which the guns could engage enemy airplanes.

Elevation : In degrees, this figure shows how close to the vertical the gun could be erected from its original horizontal position.

Traverse : All could cover targets at any angle of a 360 degree circle.

Rate of Fire : Shown in rounds per minute, this indicates about how much flak a given weapon could let loose at a sustained rate.

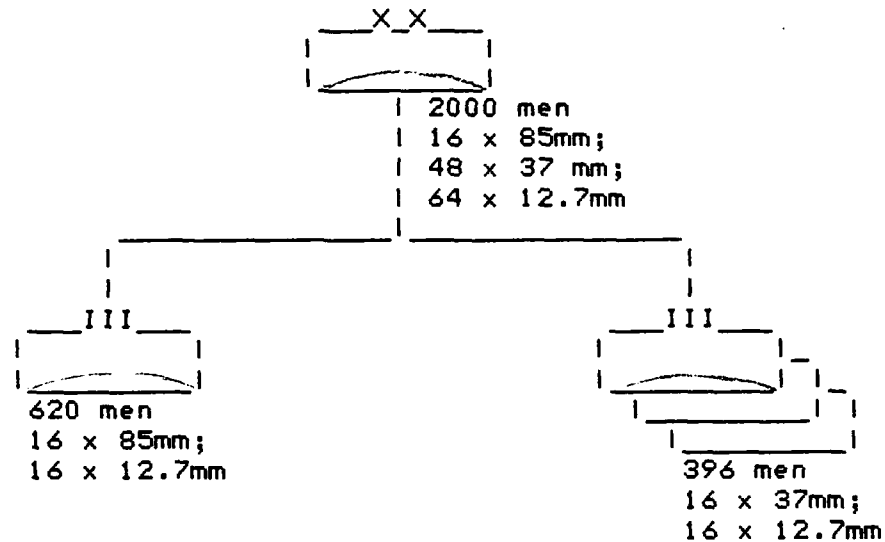
SOURCES: Sovetskaya Voennaya Entsiklopediya , 1977 ed., s.v. "Zenitnaya Pushka," by A.N. Latukhin, pg. 455.

APPENDIX THREE, Annex One

Figure 38

ProtivoVodushnaya Oborony Organizations

1944 Antiaircraft Division:



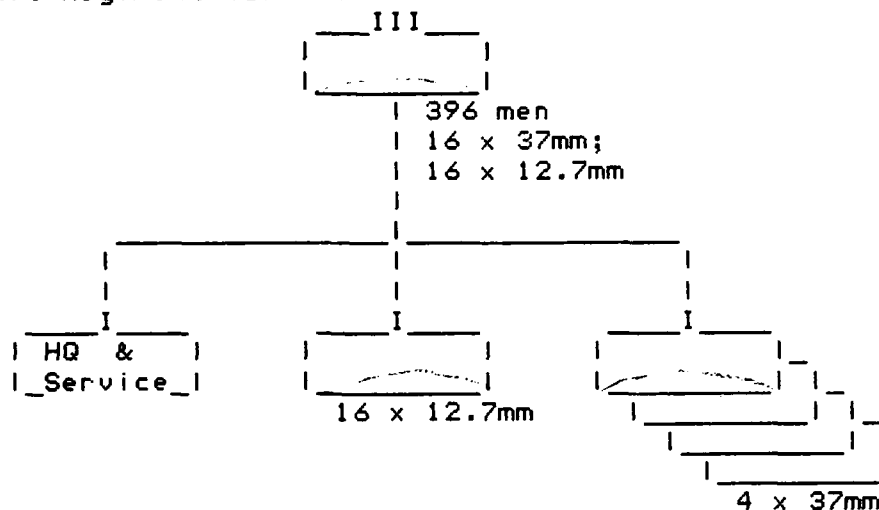
SOURCES: N.A. Svetlishin, Voyska PVO strany v Velikoy Otechestvennoy Voiny (Moscow: Izdatelstvo "Nauka," 1979), pp. 160-161; Sovetskaya Voennaya Entsiklopediya, 1977 ed., s.v. "Zenitny Artilleriyskiy Polk," by E. Ya. Shereshevskiy, pg. 459; Oberst Richard Gehlen, Abteilung Fremde Heere Ost, "Troop Survey and Organization of the Red Army- Status as of August 1944" in Red Army Order of Battle 1941-1943 (Allentown, Pennsylvania: Game Publishing, Inc., 1983), pg. 135.

APPENDIX THREE, Annex One

Figure 39

Soviet PVO Continued

1944 Antiaircraft Regiment (37mm):



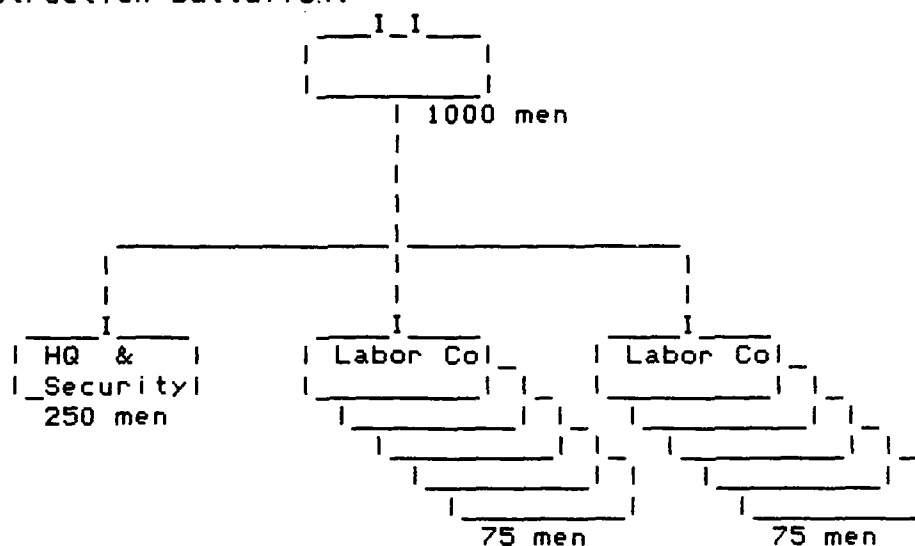
SOURCES: N.A. Svetlshin, Voyska PVO strany v Velikoy Otechestvennoy Vayne (Moscow: Izdatelstvo "Nauka," 1979), pp. 160-161; Sovetskaya Voennaya Entsiklopediya, 1977 ed., s.v. "Zenitny Artilleriyskiy Polk," by E. Ya. Shereshevskiy, pg. 459; Oberst Richard Gehlen, Abteilung Fremde Heere Ost, "Troop Survey and Organization of the Red Army- Status as of August 1944" in Red Army Order of Battle 1941-1943 (Allentown, Pennsylvania: Game Publishing, Inc., 1983), pg. 135.

APPENDIX THREE, Annex One

Figure 40

Soviet PVO Continued

1944 Labor Construction Battalion:



Women were also used, as at the FRANTIC bases.

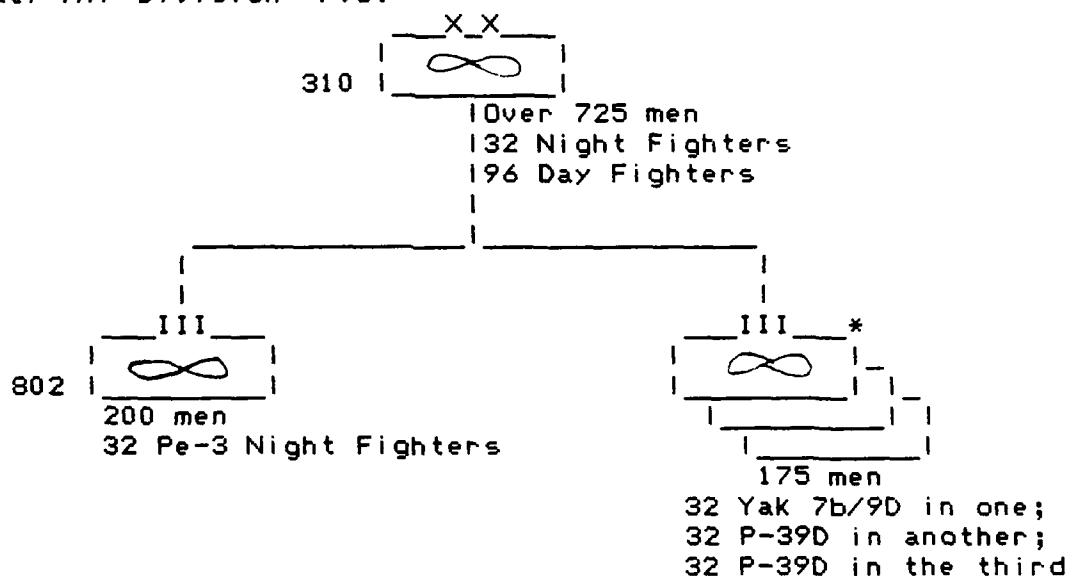
SOURCES: Oberst Richard Gehlen, Abteilung Fremde Heere Ost, "Troop Survey and Organization of the Red Army- Status as of August 1944" in Red Army Order of Battle 1941-1943 (Allentown, Pennsylvania: Game Publishing, Inc., 1983), pg. 166.

APPENDIX THREE, Annex One

Figure 41

Soviet PV0 Continued

310th Fighter Air Division--PV0:



*Unit designations unknown.

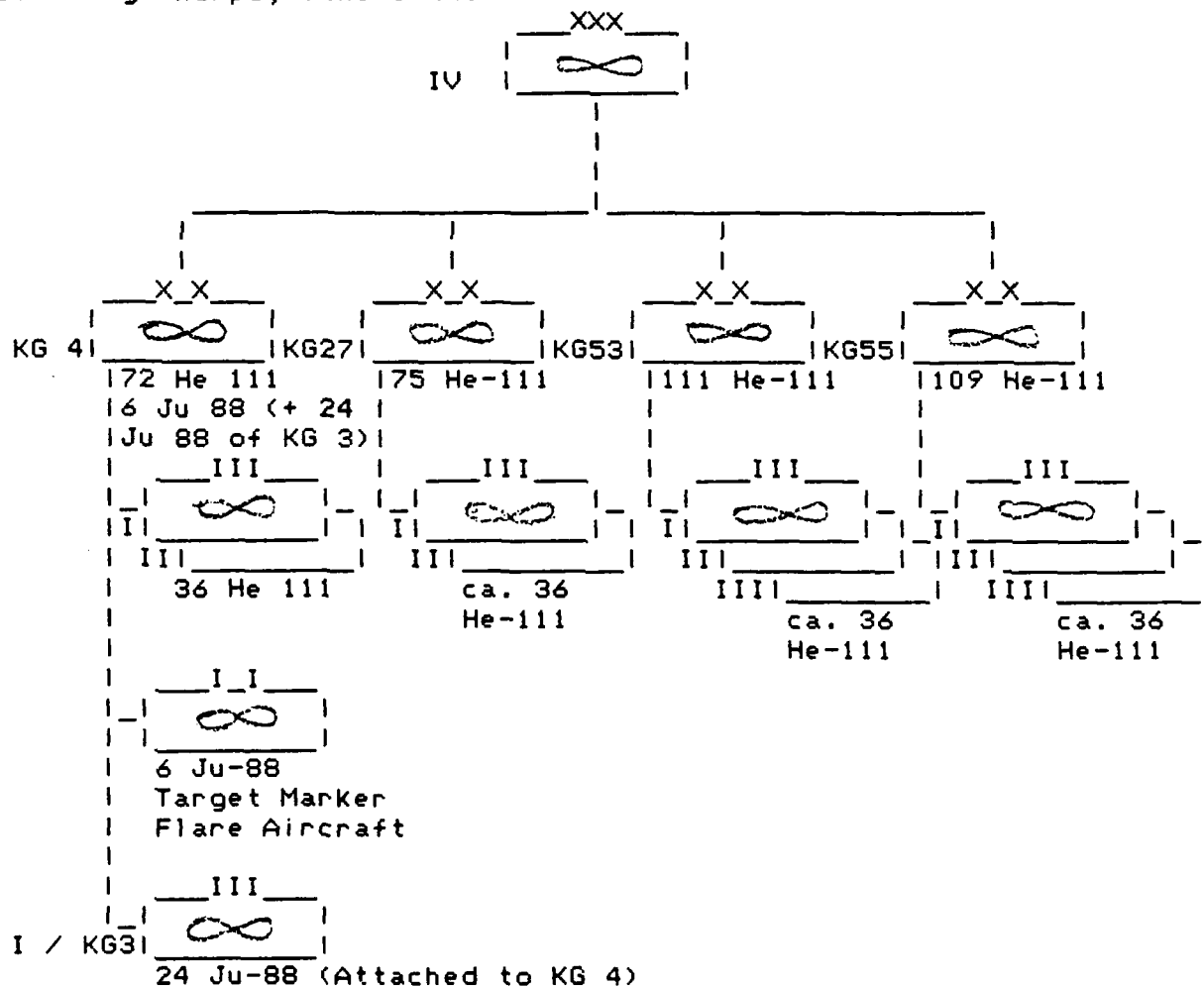
SOURCES: "MAAF History of FRANTIC, 26 October 1943 to 15 June 1944," 12 July, 1944, USAF Historical Research Center, Record 622.430-6, Maxwell AFB, Alabama, pg. 24; A. Nikitin, "Chelnochnye operatsiy," Voenno-Istoricheskiy Zhurnal, 11, (1975), pg. 45; Von Hardesty, Red Phoenix (Washington, D.C.: Smithsonian Institution Press, 1982), pp. 86-88; Asher Lee, The Soviet Air Force (London: Gerald Duckworth and Company, Ltd., 1950), pg.148; Glenn B. Infield, The Poltava Affair (New York: Macmillan Publishing Co., Inc., 1973), pp. 88, 159.

APPENDIX THREE, Annex Two

Figure 42

Luftwaffe Organizations

IV Fliegerkorps, June 1944:



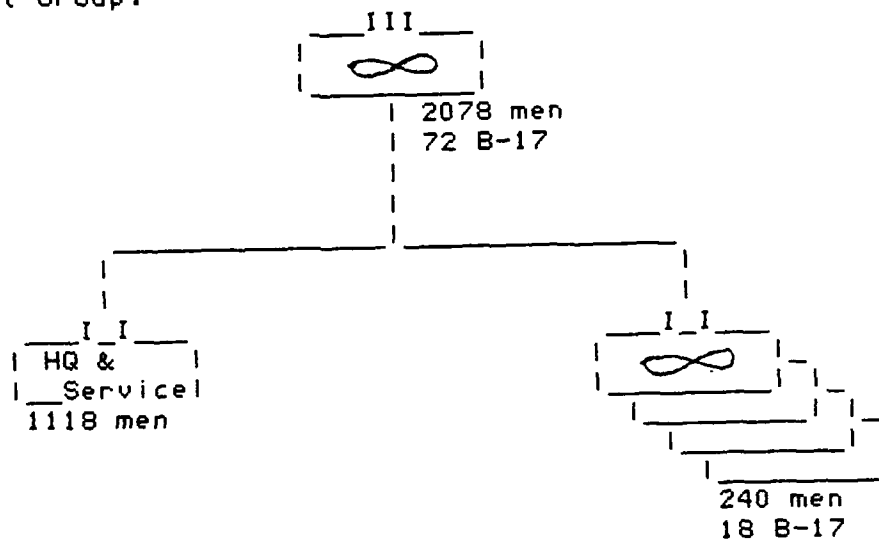
SOURCES: Heinrich Hoffer, "A Lesson in Security," Headquarters, U.S. Army Air Forces, Mediterranean Theater of Operations (Washington, D.C.: Headquarters, Army Air Forces, 1946), pg. 69; Hans Dieter Berenbrok [Cajus Bekker], The Luftwaffe War Diaries (London: Macdonald, 1966), pp. 355, 373; Matthew Cooper, The German Air Force: An Anatomy of Failure (New York: Jane's Publishing Co., 1981), pp. 44, 328; Glenn B. Infield, The Poltava Affair (New York: Macmillan Publishing Co., Inc., 1973), pp. 113, 124.

APPENDIX THREE, Annex Three

Figure 43

United States Army Air Forces Organization

1944 Bombardment Group:



Operating units usually ran four squadrons of six to ten bombers each.

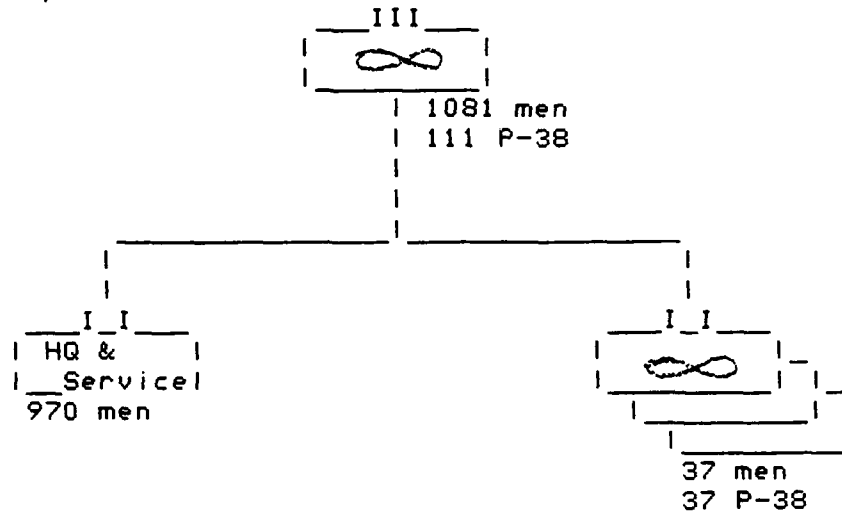
SOURCES: Wesley L. Craven and James L. Cate, The Army Air Forces in World War II 7 vols. (Chicago: The University of Chicago Press, 1952), vol. 6: Men and Planes, pg. 59.

APPENDIX THREE, Annex Three

Figure 44

U. S. AAF Continued

1944 Fighter Group (P-38):



Operating units usually deployed three squadrons of about twenty to twenty four planes each.

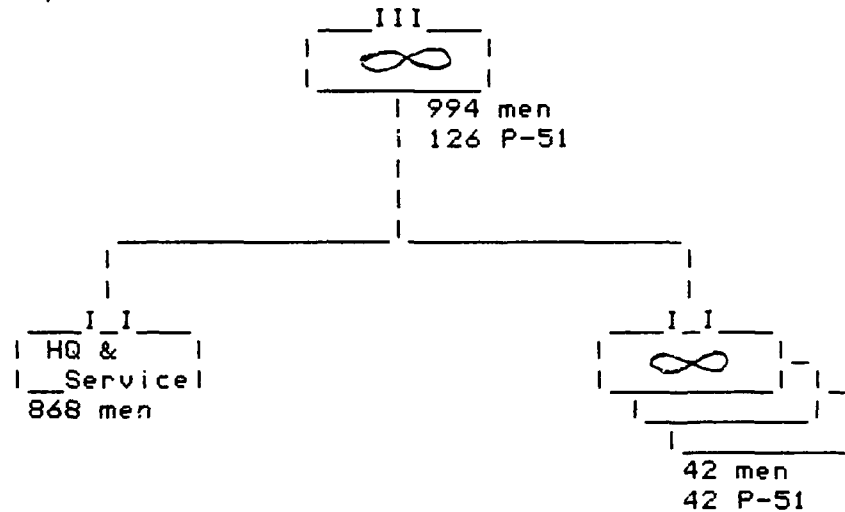
SOURCES: Wesley L. Craven and James L. Cate, The Army Air Forces in World War II 7 vols. (Chicago: The University of Chicago Press, 1952), vol. 6: Men and Planes , pg. 59.

APPENDIX THREE, Annex Three

Figure 45

U. S. AAF Continued

1944 Fighter Group (P-51):



Operating units usually deployed three squadrons of about twenty to twenty four planes each.

SOURCES: Wesley L. Craven and James L. Cate, The Army Air Forces in World War II 7 vols. (Chicago: The University of Chicago Press, 1952), vol. 6: Men and Planes, pg. 59.

APPENDIX FOUR, Annex One
Soviet Order of Battle, FRANTIC Operations

Stavka Verkhovnogo Glavnokomandovaniya : Moscow

Chief, General Staff, Red Army:
Marshal A. M. Vasilievsky
Deputy for Operations, General Staff:
General A.A. Antonov
Red Army Staff Representatives:
Major General N. V. Slavin
Major General S. Levandovich
Soviet Air Force (VVS) Commander: Marshal of Aviation A.A. Novikov
Soviet Air Force (VVS) Deputy Commander:
Colonel General of Aviation A. V. Nikitin
Chief, Intelligence and Reconnaissance (VVS):
Lieutenant General of Aviation D. Grendal
Chief of Weather Services: Lieutenant General Eugene K. Fedorov

169th Aviatsionuyu bazu osobogo naznacheniya (ABON) - 169th Aviation Base Special Task Force : Poltava, Mirgorod, Piryatin

Commander: Major General of Aviation A. R. Perminov
Political Deputy: Lieutenant Colonel I. I. Kolesnikov
Chief of Staff: Major General S. K. Kovalev
Chief of Operations: Major N. F. Shchepankov
Chief of Airdrome Center: Engineer Major K. A. Stroganov

Component forces:

Brigade of Mechanics/Plane Handlers (designation unknown)
Three Truck Battalions
Three Service Battalions
Two Labor Construction Battalions

310th Istrebitelnaya Aviatsionnaya Diviziya (IAD) - 310th Fighter Aviation Division : Poltava, Mirgorod, Piryatin

Commander: Colonel A. T. Kostenko

Component Units:

802 Nochnaya Istrebitelnaya Polk (NIP) - 802d Night Fighter Regiment : probably based at Mirgorod

P-39D equipped Fighter Regiment (designation unknown): Piryatin

P-39D equipped Fighter Regiment (designation unknown): Mirgorod

Yak 7b/9D equipped Fighter Regiment (designation unknown):
Poltava

Elements, 6th korpusa zenitno-artilleriyskaya - units from 6th Antiaircraft Artillery Corps, probably most of an Antiaircraft Division (designation unknown): 37mm regiments definitely based at

AD-A169 037

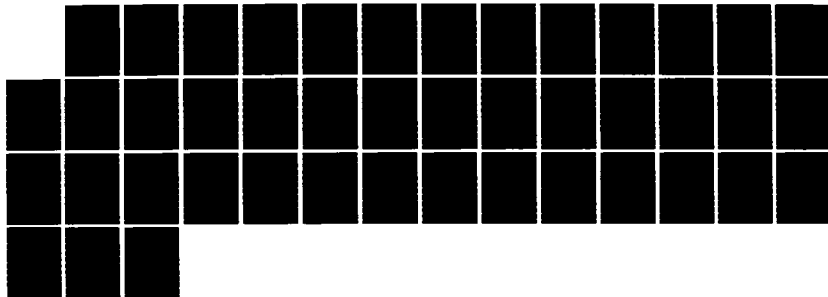
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THE SOVIET VOENNO VOZDUSHNIE SILY 1941-1945(U) CHICAGO
UNIV IL D P BOLGER JAN 85

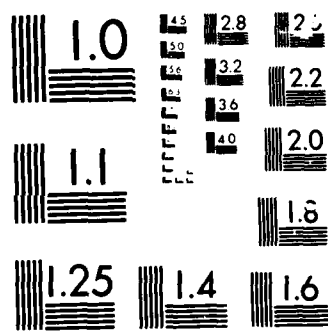
4/4

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Poltava, Mirgorod, and Piryatin. Three batteries of 85 mm reported at Poltava by some eyewitness accounts of the 21-22 June 44 raid.

SOURCES: "Report of Proceedings of Board of Officers," 2 August, 1944, USAF Historical Research Center, Record 522.01-1, Maxwell AFB, Alabama; Colonel Archie J. Old, "Report on Shuttle Mission to Russia," 6 July, 1944, USAF Historical Research Center, Record 522.01-1, Maxwell AFB, Alabama; Colonel Edward D. Gray, "German Bombing of Poltava Airdrome on 21st June, 1944," 29 June, 1944, USAF Historical Research Center, Record 522.161-5, Maxwell AFB, Alabama; A. Nikitin, "'Chelnochnye' operatsiy," Voenno-Istoricheskiy Zhurnal, 11, (1975), pp. 42, 43, 44, 45; Glenn B. Infield, The Poltava Affair (New York: Macmillan and Co., Inc., 1973), pp. 41, 48; John R. Deane, The Strange Alliance (New York: The Viking Press, 1947), pp. 30-31, 108.

APPENDIX FOUR, Annex Two

Luftwaffe Order of Battle, June 1944

IV Fliegerkorps : Minsk

Commander: General Rudolf Meister

Component units participating in Poltava/Mingorod raids:

Kampfgeschwader 3 (only one group) : attached to KG 4Kampfgeschwader 4 : vicinity Minsk

Commander: Colonel Graubner (first name unknown)

Kampfgeschwader 27 : vicinity Minsk

Commander: Colonel Rudi Miller

Kampfgeschwader 53 : vicinity Minsk

Commander: Colonel Fritz Pockrandt

Kampfgeschwader 55 : vicinity Minsk

Commander: Colonel Wilhelm Antrup (Mission Commander for raids)

SOURCES: Heinrich Hoffer, "A Lesson in Security," in Headquarters, U.S. Army Air Forces, Mediterranean Theater of Operations, Intelligence Section, Defeated (Washington, D.C.: Headquarters, Army Air Forces, 1946), pg. 69; Glenn Infield, The Poltava Affair (New York: Macmillan Publishing Co., Inc., pp. 112, 149.

APPENDIX FOUR, Annex Three

United States Army Air Forces Order of Battle, FRANTIC Operations
Part I, Supervisory and Support Units

Headquarters, United States Army Air Forces : Washington, D.C.

Commander, Army Air Forces: General H. H. "Hap" Arnold
Chief, Air Staff: Major General Barney M. Giles
Assistant Chief, Plans/Operations: Brig. Gen. Laurence S. Kuter

United States Military Mission, USSR : Moscow

Mission Chief: Major General John R. Deane
Supply Division: Major General Sidney P. Spalding
Army Division: Brigadier General William E. Crist
Naval Division: Rear Admiral Clarence E. Olsen
Air Division: Major General Robert L. Walsh (also Eastern
Command commander)

United States Army Strategic Air Forces : Bushy Park, England

Commander: Lieutenant General Carl Spaatz
Deputy Commander: Major General Fred Anderson

Mediterranean Allied Air Forces : Caserta, Italy

Commander: Lieutenant General Ira C. Eaker

Persian Gulf Command : Teheran, Iran

Commander: Major General Donald H. Connolly

Eastern Command, U.S. Army Strategic Air Forces : Poltava

Commander: Major General Robert L. Walsh
Deputy Commander: Colonel Alfred A. Kessler
Deputy for Operations: Colonel Paul Cullen
Deputy for Administration: Colonel Laurence B. Hickam
Chief of Staff/ Weather Officer: Colonel Lewis L. Mundell

Component units:

24th Region, Army Airways and Air Communications Service : Poltava

Commander: Lieutenant Colonel William Day

Base Unit #559 : Poltava

Commander: Lieutenant Colonel Curtis P. Boas

Base Unit #560 : Piryatin

Commander: Colonel David B. Lancaster

Base Unit #561 : Mirgorod

Commander: Lieutenant Colonel James R. Irish

SOURCES: Glenn B. Infield, The Poltava Affair (New York: Macmillan and Co., Inc., 1973), pp. 1, 4, 16, 35, 39, 40, 46.; John R. Deane, The Strange Alliance (New York: The Viking Press, 1947), pg. 27.

APPENDIX FOUR, Annex Three
-- Continued

Part II, Combat Units

Eighth Air Force : High Wycombe, England

Commander: Lieutenant General James H. Doolittle

3rd Air Division : Camp Blainey, Thetford, England

Commander: Major General Curtis E. LeMay
Major General Earle E. Partridge (21 Jun 44)

13th Bombardment Wing : Horham, England

Commander: Colonel Edgar M. Wittan

95th Bombardment Group : Horham, England

Squadrons: 334, 335, 336, 412
Commander: Colonel Karl Truesdell, Jr.

100th Bombardment Group : Thorpe Abbots, England

Squadrons: 349, 350, 351, 418
Commander: Colonel Thomas S. Jeffrey

390th Bombardment Group : Framlingham, England

Squadrons: 568, 569, 570, 571
Commander: Colonel Frederick Ott
Colonel Joseph A. Miller (17 Sep 44)

45th Bombardment Wing : Snetterton Heath, England

Commander: Colonel Archie J. Old, Jr.

96th Bombardment Group : Snetterton Heath, England

Squadrons: 337, 338, 339, 413
Commander: Colonel Robert W. Warren

388th Bombardment Group : Knettishall, England

Squadrons: 560, 561, 562, 563
Commander: Colonel William B. David

452nd Bombardment Group : Deopham Green, England

Squadrons: 728, 729, 730, 731
Commander: Colonel Thetus C. Odom
Colonel Archibald V. Smith (24 Jul 44)
Colonel William D. Eckert (1 Aug 44)
Lt. Colonel Charles W. Sherbourne (13 Sep 44)

65th Fighter Wing : Saffron Walden, England

Commander: Brigadier General Jesse Auton

4th Fighter Group : Debden, England

Squadrons: 334, 335, 336

Commander: Colonel Donald J. M. Blakeslee

355th Fighter Group : Steeple Morden, England

Squadrons: 354, 357, 358

Commander: Colonel William J. Cummings

66th Fighter Wing : Sawston, England

Commander: Brigadier General Murray C. Woodbury

357th Fighter Group : Leiston, England

Squadrons: 362, 363, 364

Commander: Colonel Donald W. Graham

67th Fighter Wing : Walcott Hall, England

Commander: Brigadier General Edward W. Anderson

20th Fighter Group : Kingscliffe, England

Squadrons: 55, 77, 79

Commander: Colonel Harold J. Rau

352nd Fighter Group : Bodney, England

Squadrons: 328, 486, 487

Commander: Colonel Joe L. Mason

Fifteenth Air Force : Bari, Italy

Commander: Major General Nathan F. Twining

5th Bombardment Wing : Foggia, Italy

Commander: Brigadier General Charles W. Lawrence

483rd Bombardment Group : Sterparone, Italy

Squadrons: 815, 816, 817, 840

Commander: Colonel Paul L. Barton

99th Bombardment Group : Tortorella, Italy

Squadrons: 346, 347, 348, 416

Commander: Colonel Ford J. Lauer

2nd Bombardment Group : Amendola, Italy

Squadrons: 20, 49, 96, 429

Commander: Colonel Herbert Rice

306th Fighter Wing : Torremaggiore, Italy

Commander: Brigadier General Dean C. Strother

14th Fighter Group : Triolo, Italy (P-38 unit)

Squadrons: 37, 48, 49

Commander: Colonel Oliver B. Taylor

Colonel Daniel S. Campbell (18 Jul 44)

52nd Fighter Group : Madna, Italy

Squadrons: 2, 4, 5

Commander: Colonel Robert Levine

82nd Fighter Group : Vincenzo, Italy (P-38 unit)

Squadrons: 95, 96, 97

Commander: Colonel William P. Litton

Lieutenant Colonel Ben A. Mason (4 Aug 44)

31st Fighter Group : San Severo, Italy

Squadrons: 307, 308, 309

Commander: Colonel Yancey S. Tarrant

325th Fighter Group : Lesina, Italy

Squadrons: 317, 318, 319

Commander: Colonel Chester L. Sluder

SOURCES: Maurer Maurer, editor, Air Force Combat Units of World War II (Washington, D.C.: U.S. Air Force Historical Division, 1961), pp. 25-27, 36, 58, 68-69, 83-84, 114, 148-149, 163-165, 165-166, 166-167, 170-171, 172, 207, 237, 239, 275, 277-278, 327, 355, 377, 382, 391, 403, 404, 416, 434, 464, 470, 472.

APPENDIX FIVE

Aircraft Losses and Claims

American Losses

In determining the numbers and types of United States Army Air Force airplanes lost on each of the seven FRANTIC operations, American aircraft casualties can be divided into six categories. The official tabulations were arrayed under: lost to enemy aircraft, lost to enemy flak, accidental destruction, down in Soviet territory, and unknown.¹ These five categories are fairly self-evident, though it should be observed that crew losses over German-occupied territory were always treated as Missing In Action (MIA) until positive proof of death, wounding, or capture was secured through the International Red Cross. Crew losses were significantly below aircraft losses, thanks to Soviet recovery of U.S. airmen down in Soviet territory.² On American bomber raids, Wounded In Action (WIA) and Killed In Action (KIA) figures usually reflected men brought back on damaged B-17s.

A sixth category must be added to complete the USAAF loss totals. This is the consideration of aircraft so heavily damaged as to be unable to return to Italy at the end of each mission. In England or Italy, a badly damaged plane that struggled home to its own airfield accomplished two things beyond the capability of a heavily shot-up craft limping back to the Poltava air complex. First (and most critical), a beat-up B-17 that made it to England (or Italy) brought back a trained air crew to a place where they could immediately pick up a spare plane and go back to the fight (however unwilling said crew might be). Second, the torn-up bomber or fighter could be pieced back together in relative calm at the large, well-stocked maintenance facilities in East Anglia or near the Adriatic Sea; or, if the damage was too great, the airplane could be junked (a "hanger queen"), its usable parts stripped bit by bit to refurbish other craft (in a process called "cannibalization"). But this was not the case if the ailing bomber or fighter skidded in to land in Russia.

The problem was more in the concept of a shuttle raid to a small, forward base than in anything the Soviets did or did not do. Earlier experience with shuttle raids to North Africa (August, 1943) demonstrated that even the best-stocked satellite facilities were unable to restore many of these seriously damaged aircraft.³ But shuttle bases (like Poltava, Mirgorod, and Piryatin) had few, if any, spare aircraft for stranded aircrews to use, resulting in a population of displaced fliers exiled by lengthy repairs. Many damaged planes were eventually fixed, but only fifteen fighters (and no bombers) ever returned in organized combat missions throughout the FRANTIC experience.⁴ In England, by comparison, a repaired B-17 would be shipped out immediately to flying, fighting units. Repaired planes in the Poltava complex exfiltrated to Italy in small groups, often weeks after their parent formations departed. Pilots and flight crews whose planes were not repairable had to be squeezed in whenever possible on already over-burdened supply runs that routed them to Italy via Teheran, Iran. This was a time-consuming exercise.⁵ As a result of all of this, planes too damaged to return with their parent FRANTIC units were as good as lost. This was particularly true of 8th Air Force planes that had to fly through Italy to get back to home stations. These individual stragglers conducted no missions enroute.

and the bottom line in Italy and England was that heavily damaged planes (and their skilled crews) did not come back from FRANTIC in any useful time frame.

Given this unusual side-effect of shuttle operations, American air commanders who planned FRANTIC were going into things with a built-in loss escalator in the form of this inability to "turn around" badly injured aircraft endemic to shuttle-type exercises. American losses without considering planes (and crews) grounded in the Ukraine for extensive repairs totalled 61 bombers, 31 fighters, 4 KIA, 24 WIA, and 59 MIA. 27 B-17 bombers and 44 fighters, plus 314 trained fliers, were left back in the USSR awaiting the eventual overhauls of their planes or else transportation out from Air Transport Command.⁶ One other area needs to be addressed in calculating the American aircraft toll. An American B-17 bomber had a skilled ten man crew, trained to work as a team to push their big plane through to hit targets and return.⁷ Every bomber crew casualty disrupted the bomber team's cohesion and organization, and every B-17 shot down over enemy countries took ten men with it to their death or imprisonment. B-17 bombers were naturally more expensive to produce than single-seat fighters, and the Luftwaffe correctly adjudged them lucrative (if difficult) targets to attack. The relative value of a B-17 to a fighter must be kept in mind when comparing American and German losses.

German Losses and "Claims"

Turning to German aircraft destroyed during FRANTIC, the first thing to point out is that the Luftwaffe records for this period on the Eastern and Southeastern Fronts are sketchy to say the least. It is reliably known that two German bombers were destroyed at Poltava on 22 June 1944.⁸ Other than that, one must rely on American estimates to determine the number of German planes lost in air combat around American bomber formations and allegedly destroyed on the ground during fighter sweeps.

All claims tend to be a bit inflated in the twisting confusion of aerial combat, with two or more fighter pilots often claiming the same enemy craft in honest ignorance of each other's combat actions. This was probably because all trim fighter formations tended to split both horizontally and vertically as soon as contact was made with the foe. American fighter pilot claims on FRANTIC III were the only ones that seemed totally out of line, since the American P-38 and P-51 pilots credited themselves with a whopping one hundred and twenty kills: sixty four aerial victories and fifty six ground strafing victims. This is in seeming contradiction to the fact that total German aircraft strength in the Southeast region at that time was below one hundred and fifty three total planes, and the German Luftwaffe "resurrected" rather dramatically a week later to bloody the nose of FRANTIC IV over the same area.⁹ FRANTIC III provided the only really outlandish claim figures. However, in the absence of further data, the FRANTIC III fighter claims, though highly suspect, are tabulated as accurate in this study. "Probables" and "damaged" were deleted to allow for overclaiming.

As for bomber "kills," the FRANTIC B-17s did not greatly strain credibility in their modest assertions. Eastern Command records apportion to the big craft ten destroyed, seven probable, and six damaged. However, one must not put too much credence into any B-17

bomber crew claims. Bombers went to and from their targets in huge, lumbering arrays, airplanes stacked and aligned for maximum defensive firepower. This was called a "combat box." The churning web of tracer fire spewed by numerous electrically turning gun turrets greatly confused just who "got" any certain German fighter that flamed or smoked in the bowels of the massive B-17 combat boxes. Everyone in sight counted coup on any planes shot down, carefully wording their debriefing forms with key phrases like "pilot bailed out," "in flames," and "disintegrated." It was not that the eager gunners were lying; the wildly exaggerated reports of enemy casualties were accepted at face value in the bomb groups because there was little contrary evidence at hand and it helped alleviate the costs of bad missions.¹⁰

But the B-17 commanders knew the actual situation, as evidenced in the comments of an 8th Air Force bombardment group colonel: "I had a very low regard for B-17 gunners. I flew forty-five missions and I could never be sure that I saw a B-17 shoot down a German fighter. I saw many smoking but I knew that a fighter 'smoked' when it throttled back. There was no official policy to overdo confirmations but we were always prepared to be lenient, especially with gunners who had been through a tough mission."¹¹

There is statistical data available to demonstrate exactly how far the B-17 gunners' mental reach exceeded their bullets' grasp. A quick analysis of the tough "Black Week" missions of 8 through 14 October, 1943 illustrates the problem, using verified Luftwaffe records. American bomber crews (flying without fighter escort) alleged 589 Germans destroyed in four days of raids. German information reflects a loss of 107 planes, just over eighteen percent of the planes credited to bomber gunnery.¹² This overclaiming has been factored into the current study by discounting "probables" and "damaged," though the reader should be cautioned that the reflected German losses are likely somewhat lower.

One final remark is necessary in the area of German casualties. German pilots were fighting over or near their own bases and inside their own territory. This meant that most Germans who survived the disabling of their fighters could successfully parachute down and pick up a new plane to fight again. For the German Air Force, it was a fair trade to swap a single engine plane for a B-17 four engine bomber and its ten man crew, particularly because the Luftwaffe pilots were usually recovered after bailing out.¹³

APPENDIX FIVE

Aircraft Losses and Claims

Notes

1. Robert L. Walsh, "Eastern Command Fact Book," in The Poltava Affair (New York: Macmillan and Co., 1973), pp. 241-245.
2. Ibid.
3. Wilbur H. Morrison, Fortress Without a Roof (New York: St. Martin's Press, 1982), pp. 171-173; Sovetskaya Voennaya Entsiklopediya, 1980 ed., s.v. "Chelnochnye Operatsiy," by M. N. Kozhevnikov, pg. 446.
4. Walsh, "Eastern Command Fact Book," pp. 241-245.
5. John R. Deane, The Strange Alliance (New York: The Viking Press, 1947), pp. 78-79, 114; A. Nikitin, "'Chelnochnye' operatsiy," Voennno-Istoricheskiy Zhurnal, 11, (1975), pg. 46; Glenn B. Infield, The Poltava Affair (New York: Macmillan and Co., 1973), pp. 158, 166-167.
6. Walsh, "Eastern Command Fact Book," pp. 241-245.
7. Thomas M. Coffey, Decision Over Schweinfurt (New York: David McKay and Co., 1977), pp. 23-24.
8. Heinrich Hoffer, "A Lesson in Security," in Headquarters, U.S. Army Air Forces, Mediterranean Theater of Operations, Intelligence Section, Defeated (Washington, D.C.: Headquarters, Army Air Forces, 1946), pg. 69.
9. Walsh, "Eastern Command Fact Book," pp. 241-245; see also Appendix Seven, Table Eight for German strength figures.
10. Martin Middlebrook, The Schweinfurt-Regensburg Mission (New York: Charles Scribner's Sons, 1983), pp. 261-262.
11. Ibid., pg. 262. The officer speaking was Colonel Maurice Preston, commander of the 379th Bombardment Group.
12. Wesley L. Craven and Jerome L. Cate, The Army Air Forces in World War II, 7 vols., (Chicago: University of Chicago Press, 1949), vol. 2, Europe: Torch to Pointblank, August 1942 to December, 1943, pp. 695, 699, 704.
13. Middlebrook, The Schweinfurt Regensburg Mission, pg. 74.

APPENDIX SIX

American Bombing Methods, Accuracy, and Effectiveness

American Bombing Methods

United States Army Air Force bombers in World War II were said to epitomize the doctrinal technique of daytime precision bombing. This system focused upon using mass formations of heavy bombers, flying in broad daylight, to strike specific industrial and military targets. The Boeing B-17 "Flying Fortress" was designed with the requisite material toughness, range, payload, and altitude ceiling to handle the demands of fighting under the sun. However, the addition of the intricate 1940s era "high technology" device called the Norden bombsight permitted accurate delivery of ordnance from great heights. Under ideal conditions, a Norden-equipped Flying Fortress (with a skilled bombardier and a trained flight crew) could deliver 6000 pounds of high explosives or incendiaries dead on a target 30,000 feet below.¹ This was the theoretical capability of every B-17 that flew on a FRANTIC raid over Occupied Europe, and planners assumed that a hundred such bombers could flatten a thousand foot diameter target area.

Tactical considerations soon altered the concept of precision bombing. The Royal Air Force (RAF) Bomber Command, which had been hitting Germany by night since mid-1940. Penetrating at low altitudes, the massive "follow-the-leader" configurations were referred to as "bomber streams." Every British "bomb aimer" picked out the target in his sight and dropped his craft's load on his own volition. This RAF method was referred to as night-time area bombing.² American air fleets could not hide under cover of darkness, spoofing the German radar with aluminum foil chaff or jamming Luftwaffe fighter direction signals as they bored in to targets. The B-17s had to fight their way in, and it was discovered rather early that there was safety in numbers.

Flying Fortresses made the best use of their eleven to thirteen .50 caliber machineguns and power turrets by flying in "combat boxes." This way of operating was developed early in 1943 by Brigadier General Haywood S. Hansell, Jr., Brigadier General Laurence S. Kuter (in Washington by the time of FRANTIC), and Colonel Curtis E. LeMay, all of whom commanded units in the 8th Air Force bombing establishment.³ The suggestions and experience of many junior pilots, bombardiers, and gunners went into the concoction of these tactics. With the bombardment groups greatly under their authorized air strength of seventy two planes and ninety six crews (the average group fielded about eighteen to twenty four B-17s), Hansell, Kuter, and Lemay had to create a viable battle tactic to get the big craft safely to target, bomb, and return, with or without fighter escort.⁴

General Hansell finalized the formation, basing it partially on Colonel LeMay's 305th Group procedures. The group combat box was made up of three squadrons of six planes each, echeloned with a high, a middle, and a low squadron to the right or left. The middle squadron led, its B-17s a bit forward in the flock. On turns, the high squadron slid across the top of the middle squadron and the low squadron moved across the bottom, switching sides and echelonment as the group swung through to change direction. The approved array allowed good defensive

firepower and could be interlocked (by alternating the echelons) into a "combat wing" of two or three groups, a bigger but similarly structured version of the combat box, complete with high and low groups and a leading middle force. This was a contribution from General Kuter. These combat wings did not necessarily correspond to the wings that supervised the groups day to day, but were often designed for the task at hand. Columns of these combat wings made up really large raids. The boxes could expand as the groups built up their aircraft strength, as long as the administrative (i.e. "on paper") set-up of four squadrons was rebuilt into three "combat squadrons" before each mission. (Figure 46) Casualties, crew training, aircraft repairs, and shortages made this a typical procedure. However, these unwieldy aerial equivalents of "circled wagons" were useless for precision bombing.⁵

Brigadier General Hansell determined that the combat wings had to reconfigure for the actual target engagement. The Initial Point (or IP) was designated and briefed to every crew. It was at an obvious geographic point (like a river confluence) about twenty-five miles (five to ten minutes flight time) out from the primary target. At the IP, the groups split out of their crescent-shaped combat wings, the middle group in the lead, the low group next, and the high group third in line.⁶ On LeMay's insistence, the group boxes trained to run in relentlessly to the target from the Initial Point, regardless of enemy flak fires or marauding German fighters. The bombardier, using C-1 Automatic Flight Control Equipment (AFCE), actually directed the plane along the straight path into the dropping point. One after another, the groups would strike the target, then reassemble into their defensive alignments at a Rally Point (RP) just beyond the bombing site.⁷ (Figure 47)

But Hansell went beyond this pattern of maneuver. He decreed that only the lead plane in each group (and a few back-ups) would carry a Norden bombsight. All the other planes' Norden units were removed and replaced with extra machine guns to improve frontal firepower. The bombardiers without sights called themselves "toggleers," as their duties were limited to watching for the lead plane to drop its first bomb and then salvoing (using a toggle switch, hence the nickname) their own payloads as soon as the lead B-17 unloaded.⁸ Given that a B-17 disposed a wingspan of 104 feet and a length of 74 feet, the average bomb group of eighteen planes (nine across, two "deep") took up at least a thousand feet in frontage and two hundred feet in depth, and probably more when flak, damaged engines, pesky Luftwaffe craft, and additional American planes were added to the basic picture. FRANTIC groups, for example, deployed from thirty to forty five planes, in oversize group boxes, twin group boxes, or composite boxes made up of leftover Flying Fortresses from each participating unit.⁹

The IP/Target/RP sequence did a lot to guarantee survival of the big aircraft, but did little for bomb accuracy. Lead groups usually bombed well, but trailing elements often had no choice except to dump their ordnance blindly into churning smoke kicked up by previous strikes. German facilities, especially oil installations, learned this weakness and employed specially-generated smoke screens to confound American group bombardiers.¹⁰ Given the dispersion of an average combat box, some bombs were certain to be well off the mark even on a perfect release. But when one considers that lead bombardiers could and did err in their sightings, and that all the other planes did not

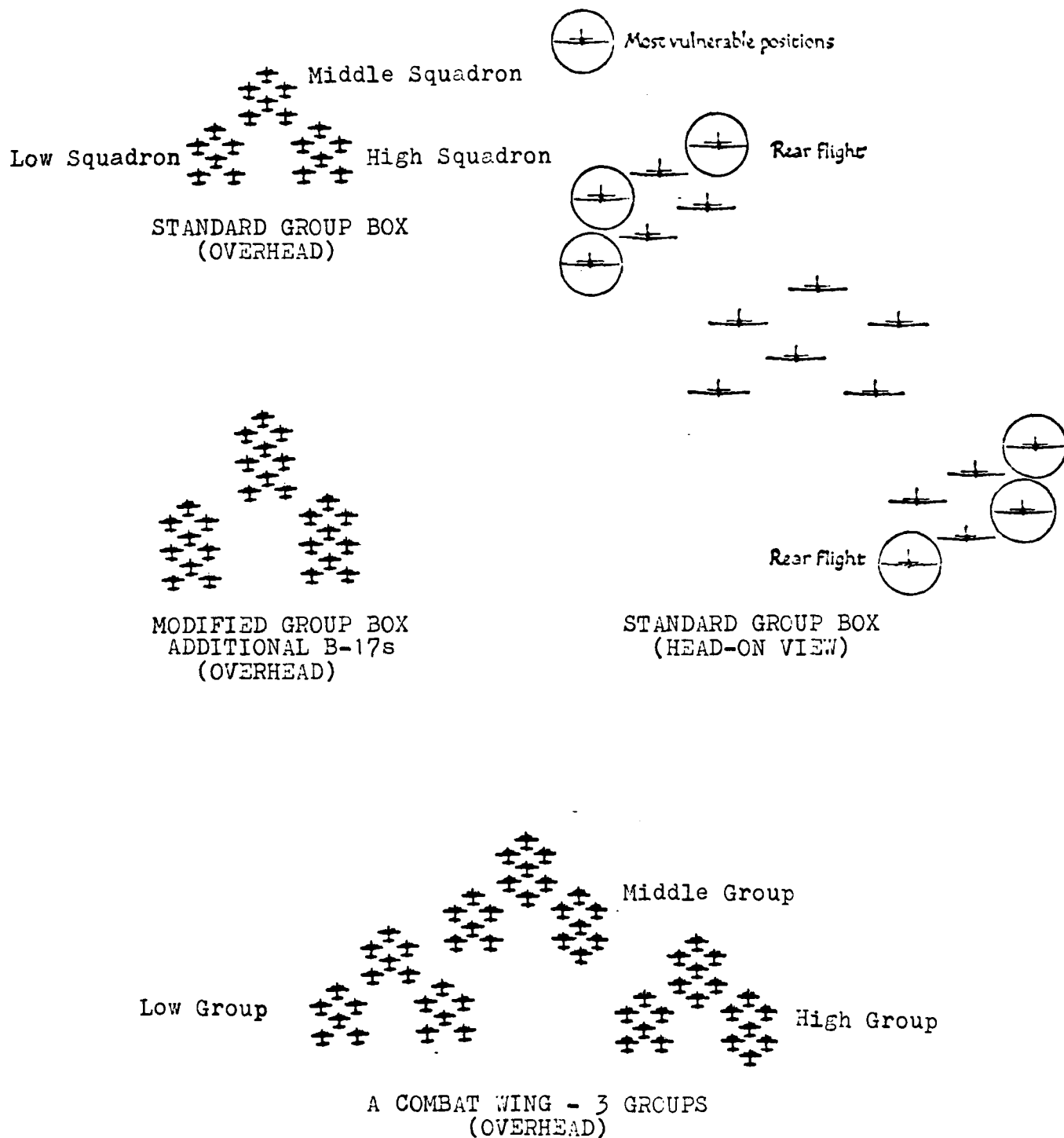


FIGURE 46

AMERICAN ARMY AIR FORCES
BOMBARDMENT GROUP
FORMATIONS

SOURCES: Martin Middlebrook, The Schweinfurt-Regensburg Mission (New York: Charles Scribner's Sons, 1983), pp. 86, 300; Wilbur H. Morrison, Fortress Without A Roof (New York: St. Martin's Press, 1982), pp. 85-87.

○ These B-17s have operational Norden Bombsights

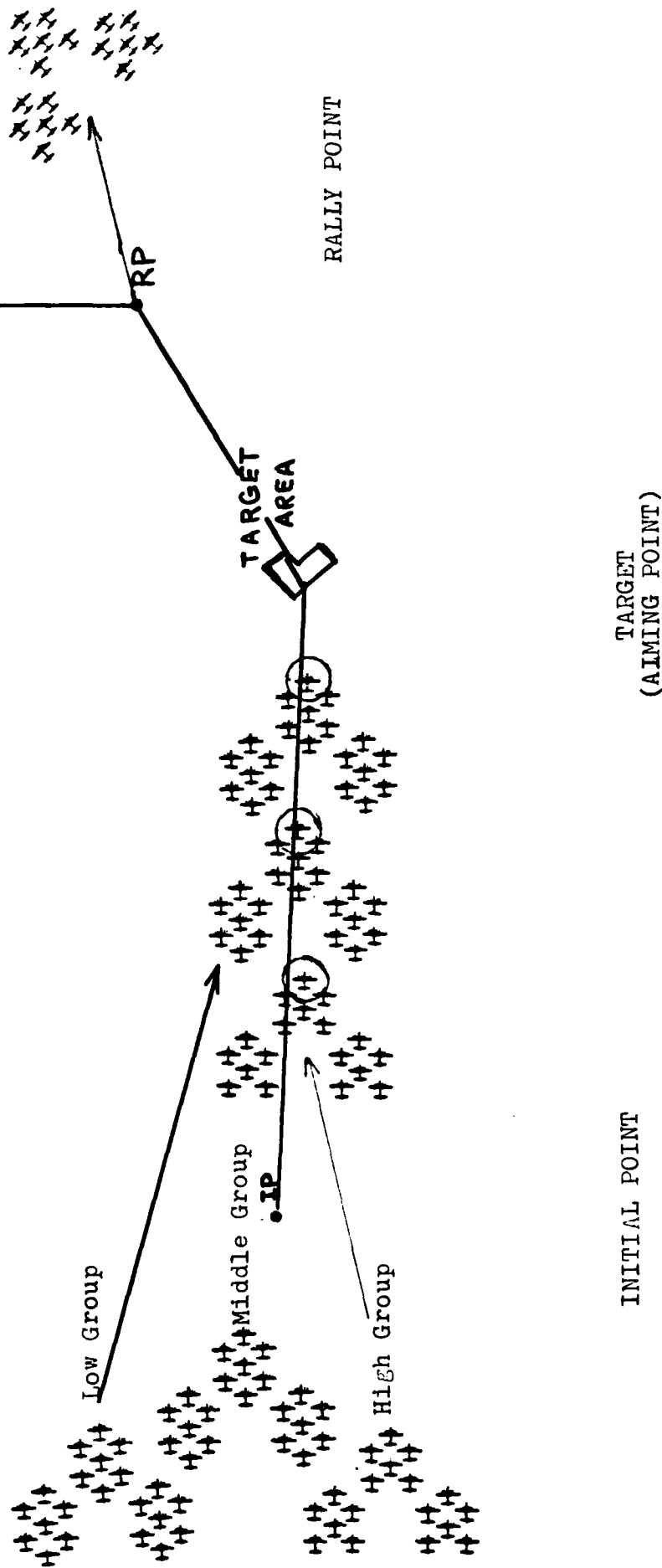


FIGURE 47

AMERICAN ARMY AIR FORCES
THE TARGET ATTACK PROFILE

SOURCES: Martin Middlebrook, The Schweinfurt-Regensburg Mission (New York: Charles Scribner's Sons, 1983), pg. 300; Wilbur H. Morrison, Fortress Without A Roof (New York: St. Martin's Press, 1982), pg. 87.

always empty their bomb bays right as the forward bomber released, actual dispersions were significant. Any case involving more than sixty planes bombing a single target resulted in a significant drop in accuracy, a situation occurring in every FRANTIC mission. The United States Strategic Bombing Survey went so far as to suggest that, at least for oil refineries, the British technique of individual sighting at low altitude could often gain better results. ¹¹

American Bombing Accuracy

Given the precision bombardment delivery process, it was not surprising that many American bombs did not strike the target. The actual percentage of bombs on aim point varied from target type to target type. Of the FRANTIC sites, the railroad targets (Debrecen and Szolnok) were the biggest and easiest to hit. These sites were followed in order of increasing difficulty by German airfields at Focsani, Galati, and Buzau/Zilistea, oil industry plants (Rhuland, Trzebinia, and Drohobycz), and finally, manufacturing concerns, like aircraft airframe and tank engine manufacturing (Rahmel and Chemnitz), and the small armaments factory in Diosgyor, Hungary.

Rail targets were true area targets, and American bombardiers could be assured that any explosives unloaded in a marshalling yard did some damage, either through line-cutting (most common), rolling stock damage, locomotive casualties, and especially the exposed signalling mechanisms. Attacking bombardiers preferred to fly into the yards broadside, perpendicular to the tracks, to insure line slicing. Relatively small bombs could wreak immense destruction, even when many of them landed between the rails or outside the service structure. Direct hits proved uncommon, but the concussion of near misses in a crowded freight yard upended lines of boxcars and derailed heavy locomotives. Aerial photographs taken after the Debrecen raid showed a typical successful bombing strike on a rail yard. Though there were only 74 direct hits, every track was cut or off its bed. Almost two hundred cars lay damaged and off the rails. During FRANTIC, such railroad targets occupied a lesser priority, despite the relative ease involved in disrupting them. After FRANTIC, the U.S. Strategic Air Forces turned on railroad communications in a big way, exploiting the "soft" nature of these facilities. The United States Strategic Bombing Survey adjudged the results "decisive," affecting every portion of the Nazi war economy. ¹²

Airfields were easy to hit, but mortal damage was very hard to achieve. If enemy aircraft could be caught on the ground, the bomb pattern could be devastating (as in the Luftwaffe assault on Poltava on 22 June, 1944). If not, the airstrip could be cratered (though most bombs missed the narrow runways themselves) and ancillary facilities like fuel and repair shops torn up. In general, a German airfield was not a good target for high altitude bombing, both due to its guarantee of active fighter defenders near at hand and the unlikelihood that the ponderous Flying Fortress combat wings could catch the enemy in nicely serried, parked rows of Messerschmitts and Heinkels. Hitting the actual runways proved quite difficult, and it was easy to toss debris or sod into the resultant holes to put the strips back into commission. U.S. raids concentrated on hangers and technical shops. Airfields proved the most usual type of FRANTIC target, and the results ranged from good (as at Galati on 6 June, 1944) to poor (as in the pattern at Focsani on 11 June, 1944). Based on USSBS data

reflecting bombing norms, about four to six percent of the bombs dropped would do damage. The effects of incendiaries depended upon what they hit and the weight of bombs used, since fire bombs did little on concrete or grass airstrips and a lot in dense maintenance areas and barracks. ¹³

Oil refineries, such as Trzebinia and Drohobycz, and synthetic distillation concerns like the Rhuland target, were more spread out than most industrial targets, though smaller than the average fighter airdrome. The expanse of grounds innate to oil plants for safety, storage, and processing methods made them a bit easier to hit for American daylight raids than manufacturing sites. Unfortunately, empty space made up much of the region in the plant fencelines. The United States Strategic Bombing Survey conducted actual physical examination of numerous synthetic and crude oil targets not long after the war ended, comparing aerial photographs and Air Force records with German plant data and physical evidence. Their conclusions were sobering for American bombardment commanders. Of any given hundred bombs dropped on an oil refinery or synthetic distillation concern, eighty seven would completely miss the target. Of the thirteen that landed inside the plant fences, eight would impact in the open ground that gave the oil targets their dispersion, doing no damage at all. Two would fail to explode (since a steady sixteen percent of all American bombs were "duds" throughout the European bombing campaign). One bomb would burst in the electrical/plumbing superstructure or ground piping lines, causing some easily repairable damage. Finally, two bombs would hit important buildings with critical plant equipment, though the damage done then depended upon fuzings and bomb weights. The USSBS found that American bombardment groups chose aim points that were not critical to plant operations two out of three times, resulting in heavy concentrations of hits around unimportant areas. All three FRANTIC targets were considered, though none became the subject of specific USSBS examination. The estimates of the USSBS (12.9 % on target in strikes flown under visual conditions and rated "good") were used as the norms for the three oil targets, though it should be noted that 2 % is a more realistic estimate of how many projectiles actually did any damage. The figures used to analyze the FRANTIC raids give the American bombardiers full benefit of any doubt. ¹⁴

Production factories struck included airframe and tank motor mills and a smaller armament plant. These types of targets were hard to hit, consisting of close clusters of long, open machine-tool galleries with cantilever roofs, interspersed with power and administrative buildings of sturdier masonry construction. American raiders had trouble hitting these places, as evidenced at Chemnitz, where a mere twenty two of 467 high explosive bombs hit inside the factory fences. Only twelve of those hit the buildings, a pathetic two and one half percent of all bombs dropped. ¹⁵ It was very hard to damage the machine tools in these facilities, which meant that post-strike photography would show a lot of collapsed roofs that did nothing to stop determined production staffs from cleaning off the steel and brick and churning out units. It was estimated by German economic studies that up to seventy percent of these critical machine tools survived unscathed. USSBS data indicated that about 5% of the average factory raid's tonnage found its mark, with 2-3 % in "fair" missions (like Chemnitz) or 7-8% in excellent missions (Rahmel), and these figures provided a basis for estimates at Rahmel and Diosgyor. ¹⁶

Accuracy remained a problem throughout the Combined Bomber Offensive. Imprecision was endemic in the group release procedures, target dust and smoke caused by preceeding forces, and the nature of the aim points themselves. There was little the "shuttle" groups could do to improve matters without greatly endangering their B-17 bombers and accepting heavier casualties. Significantly, later raids in the Pacific resorted to the use of stripped B-29s flying by night to deliver incendiaries on Japanese cities, in RAF style. Accuracy was replaced by weight of fire bombs. Precision bombing and its daylight peculiarities were not attempted again until Hiroshima and Nagasaki. Of course, by then a weapon was available that made "close" more than sufficient.¹⁷

American Bombing Effectiveness

The B-17 Flying Fortresses that flew on FRANTIC could carry up to 6000 pounds of bombs, with 4000 pounds a typical loading. The aircraft carried various classes of ordnance, with the largest being a Soviet FAB model 250 kilogram bomb (550 pounds). American high explosive bombs employed included the GP-M30 250 pound and the GP-M43 500 pound (and its successor GP-M64 500 pounder). U.S. incendiaries ("fire bombs") consisted of the usually ineffective 100 pound I-M47 (A1 and A2), and the highly effective I-M76 500 pounder.¹⁸ Each of these bomb types affected the four major target classes (railyards, airdromes, oil facilities, and factories) in different ways. The thing to keep in mind, however, is that few of these bombs actually hit the targets. B-17 raids did not make up in volume what they lacked in individual bomb mass.

Rail yards were as easy to damage as they were to hit, due to their congested nature. Any size bombs could cut rails, and high explosives shattered light rolling stock. In many ways, such areas offered ideal objectives for American B-17 groups using their standard tactics. The shuttle strikes of FRANTIC did not employ any incendiaries on rail targets.¹⁹

Damage to airfields by FRANTIC forces appeared rather disappointing, though not due to any bomb problems. Cracking concrete runways required big bombs (like 1000 pounders, minimum), so the shuttle raids concentrated on airfield service structures and occasional parked planes. As in the railroad installations, any size bomb would work, though the conscious attempt to hit clustered structures bordering the airdromes meant few bombs of any variety struck the intended areas. Most blew harmlessly on the open fields. The little 100 pound fire bombs did a fine job at Galati on 6 June, 1944, as confirmed by photoreconnaissance. They were much less useful on 11 June, 1944 at Focsani.²⁰

FRANTIC bombers utilized 500 pound and 250 pound high explosive munitions, as well as 100 pound incendiaries, to strike oil targets. These weapons were all much too small for the work at hand, with the 500 pound general purpose type actually less useful than the smaller 250 GP. A five hundred pounder, fused with a slight delay of .1 seconds nose/.025 seconds tail, was just heavy enough to crash through the light lattice of steam, electric, and product plumbing and penetrate the heavy casemates of the production areas during that fractional delay. German planners stated that consistent USAAF reliance on the 500 pound devices practically eliminated the need for protective blast walls, as they were incapable of damaging the actual

productive cracking/separation machinery after crashing through the ceilings, except through freak glancing hits. The lighter 250s, fuzed with the same delay, caused some havoc in the superstructure, since they were light enough to "stay up" long enough to explode. Unfortunately, this was also the easiest damage to repair.²¹ These bombs could do nothing to affect heavy and very heavy equipment, such as compressors, pumps, reactor vessels, heat exchangers, and gas separators.

The USSSBS noted that American oil raids were "only enough to prick the skin." The small bombs used were able to knock production down but incapable of knocking the plants out, resulting in a need for mission after mission against the same targets. Three "fixes" were recommended: instantaneous fuzing for light bombs to maximize light processing equipment effects; fewer, heavier bombs delivered in British-style raids; and more liberal use of incendiaries. The FRANTIC units did try incendiaries, but dropping the small 100 pound bombs during the Rhuland operation had small effect. This was because the fire bombs were "snuffed" by high explosive bombs, firemen could emerge to extinguish conflagrations unscathed by antipersonnel bombs, and some incendiaries even drowned in oil storage cannisters. A better way would have been to employ bigger incendiaries (like the M76 500 pounder) with long delays (up to five minutes), dropped in a cluster to close the raid and followed by some antipersonnel bomblets to keep the fire-fighters in check.²² This very technique served the Luftwaffe quite well at Poltava.

Bombs delivered on manufacturing corporation buildings were uniformly too light, with one exception noted below. The 500 pounders were too light to do much more than drop the roof, and their delay fuzings often resulted in useless craters dimpled on a factory floor. In this case, some delay in action was needed to make it through the roofing, but not so much as to allow the bomb to hit the gallery floor. The 250 pounders were entirely too light for factory work. Machine tools, as noted earlier, were rarely hit directly and seldom damaged by blast or rubble. German sources suggested that, as in the case of the oil targets, greater use of fewer, heavier bombs would have done a more thorough job and reduced the need for follow-up trips.²³

As with the oil plants, incendiaries were very effective if properly employed. The 11 September, 1944 attack on the Siegmar tank engine factory in Chemnitz featured abysmally bad bombing, but unlike other FRANTIC missions, this one carried some of the big M-76 fire bombs, an unknown small number of which hit the structures and kindled a tremendous, gutting blaze that ruined every single machine tool before it was extinguished. Interestingly enough, American intelligence assessments incorrectly judged this highly efficient strike as one of the poorest in the FRANTIC series, unaware of the devastating fire effects. The Chemnitz mission showed just how much a few heavy, choice munitions can go toward making up for inaccurate dropping patterns.²⁴

In general, American operations (and FRANTIC was quite typical) routinely delivered a lot of small bombs that did repairable injury, necessitating frequent follow-ups to keep the facilities from recovering. The Strategic Bombing Survey's Oil Division studied the problem thoroughly and made an interesting series of observations in the ruins of one heavily-bombed synthetic oil installation that amply demonstrate the efficacy of delivering larger bombs. They found that a

500 pound bomb blew a hole in the cap of a Fischer/Tropisch synthetic oil reactor. A 1000 pound munition tore a whole reactor out of the building, damaging another reactor. A certain one-ton bomb dug a crater (twenty-five feet across by ten feet deep), demolishing three reactors, badly injuring seven more, and tearing out a wall. Finally, a single two ton behemoth smashed all twelve reactors, collapsed the building, tore out all structural columns, and rendered the plant inoperative.²⁵ Theoretically, any B-17 had the payload capacity to deliver such devastating munitions, though the shuttle mission loadings of 500 and 250 pound devices characterized most B-17 flights throughout World War II.

Most American raids (and all FRANTIC missions) used only high explosives, normally the 250/500 varieties. To make matters worse, the sixteen percent rate of unexploded ordnance was truly disheartening. USSBS reports noted that German industrial workers often saw tailless munitions raining down on them, the result of improper bomb assembly.²⁶ The mix of light bombs, improper fuze settings, too few incendiaries, and a high "dud" rate limited target damage and insured that group after group would have to return many times to keep the Nazi installations crippled. The popular picture of production collapsing under a rain of explosives never really came to pass. It was beyond the capability of the bombardment groups.

APPENDIX SIX

Aircraft Losses and Claims

Notes

1. Thomas M. Coffey, Decision Over Schweinfurt (New York: David McKay and Co., 1977), pg. 23; Green, William, Famous Bombers of the Second World War (Garden City, N.Y.: Doubleday & Co., Inc., 1975), pg. 58.
2. Wilbur H. Morrison, Fortress Without a Roof (New York: St. Martin's Press, 1982), pp. 29, 33-34.
3. Ibid., pp. 84-88.
4. Ibid.; Martin Middlebrook, The Schweinfurt-Regensburg Mission (New York: Charles Scribner's Sons, 1983), pp. 83-87.
5. Morrison, Fortress Without a Roof, pg. 86.
6. Middlebrook, The Schweinfurt-Regensburg Mission, pg. 126.
7. Morrison, Fortress Without a Roof, pg. 87.
8. Ibid.; Leroy W. Newby, Target Ploesti: View from a Bombsight (Novato, Calif: Presidio Press, 1983), pg. 24.
9. Middlebrook, Fortress without a Roof, pp. 35-38; Colonel Archie J. Old, "Report on Shuttle Mission to Russia," 6 July, 1944, USAF Historical Research Center, Record 522.01-1, Maxwell AFB, Alabama.
10. United States Strategic Bombing Survey, Oil Division Report Final Report Appendix, Book 110 (Washington, D.C.: U.S. Govt. Printing Office, 1947), pg.32; Stanford Research Institute, Impact of Aerial Attack in World War II, 2 vols. (Washington, D.C.: Federal Civil Defense Administration, June 1953), vol. I: Economic Effects: Germany, pp. 49-50.
11. United States Strategic Bombing Survey, Oil Division Final Report, Book 109 (Washington, D.C.: U.S. Govt. Printing Office, 1947), pp. 82, 125; United States Strategic Bombing Survey, Aircraft Division Industry Final Report, Book 5 (Washington, D.C.: U.S. Govt. Printing Office, 1947), pg.73.
12. Newby, Target Ploesti: View from a Bombsight, pg. 52; Stanford Research Institute, Economic Effects: Germany, pp. 282, 285-286; United States Strategic Bombing Survey, European War: Overall Report (Washington, D.C.: U.S. Govt. Printing Office, 30 September, 1945), pg. 61; "Debreczen Damage Assessment," USAF Historical Research Center, Record 622.430-6, Maxwell AFB, Alabama.
13. Stanford Research Institute, Economic Effects: Germany, pp. 195-200; United States Strategic Bombing Survey, Inspection Visits to Various Targets, Book 5 (Washington, D.C.: U.S. Govt. Printing Office, 1947), pg. 2; "Focsani Damage Assessment," June, 1944, USAF Historical Research Center, Record 622.430-6, Maxwell AFB, Alabama; "Galati P.R.U., 6 June, 1944," 6 June, 1944, USAF Historical Research Center, Record 622.430-6, Maxwell AFB, Alabama.
14. USSBS, Oil Division Final Report, pp. 121, 124.
15. Stanford Research Institute, Economic Effects: Germany, pp. 195, 232; USSBS, Aircraft Division Industry Final Report, pp. 52, 73; United States Strategic Bombing Survey, The Effects of Strategic Bombing on the German War Economy, Book 3 (Washington, D.C.: U.S. Govt Printing Office, 30 October, 1945), pp. 156, 183.; United States Strategic Bombing Survey, Ordnance Industry Report, Book 80 (Washington, D.C.: U.S. Govt. Printing Office, 1947), pp. 35-36;

- United States Strategic Bombing Survey, Auto Union AG, Chemnitz and Zwickau , Book 84 (Washington, D.C.: U.S. Govt. Printing Office, 1947), pg. 17.
16. USSBS, Aircraft Division Industry Report , pp. 72-73; Middlebrook, The Schweinfurt-Regensburg Mission , pp. 268-269; Wesley F. Craven and Jerome L. Cate, The Army Air Forces in World War II , 7 vols. (Chicago: University of Chicago Press, 1949), Vol. 2: Europe: Torch to Pointblank, August 1942 to December, 1943 , pp. 686-687.
17. Lee Kennett, A History of Strategic Bombing (New York: Charles Scribner's Sons, 1982), pp. 170-171.
18. United States Strategic Bombing Survey, European War: Overall Report, Statistical Appendix , Book 2a (Washington, D.C.: U.S. Govt. Printing Office, 1947), pg.160; "Russian Bombs," 29 April, 1944, USAF Historical Research Center, Record 522.161, Maxwell AFB, Alabama.
19. Stanford Research Institute, Economic Effects: Germany , pp. 241, 282.
20. "Focsani Damage Assessment," June, 1944; "Galati P.R.U., 6 June 1944," 6 June, 1944.
21. USSBS, Oil Division Final Report , pp. 126, 128-129, 134.
22. Ibid., pp. 82, 126, 137.
23. USSBS, Aircraft Industry Final Report , pp. 54, 72; USSBS, Ordnance Industry Report , pg. 36; USSBS, Overall Report:European War , pp. 18, 92; Stanford Research Institute, Economic Effects: Germany , pp. 195, 232.
24. USSBS, Auto Union AG, Chemnitz and Zwickau , pp. 17-19.
25. USSBS, Oil Division Final Report , pg. 128.

APPENDIX SEVEN

TABLE 8

German Aircraft Distribution, June 1944

Operational Area	6 June 1944 OVERLORD Normandy, France	% of Aircraft per Area 6 Jun 44	22 June 1944 BAGRATION Belorussia, USSR	% of Aircraft per Area 22 Jun 44	Allied Threat in Each Area
Eastern (Russia)	550	24 %	441	22 %	USSR
Western (France, Benelux)	288	12 %	704	35 %	US/UK
Southern (Italy, Medi- terranean)	171	7 %	102	5 %	US/UK
Southeastern (Balkans, Greece)	100	4 %	158	8 %	US/UK/USSR
Northern (Norway)	79	3 %	78	4 %	US/UK
Reich Homeland	1179	50 %	538	26 %	US/UK
TOTAL vs. US/UK					
6 JUN 44	1717	73 %			
22 JUN 44			1422	70 %	
TOTAL vs. USSR					
6 JUN 44	650	27 %			
22 JUN 44			599	30 %	
TOTAL PLANES	2367	100 %	2021	100 %	

Southeastern area planes are counted against the USSR totals.

SOURCE: Adolph Galland, K. Ries, R. Ahnert, The Luftwaffe at War, trans. D. & I. Dunbar (Chicago: Henry Regnery, 1973), pg. 241.

APPENDIX SEVEN Continued

TABLE 9

German Fighter Losses 1940-1944

Year	Other than Eastern Front	Eastern Front	Total Losses
<u>1940</u>	1069	N/A	1069
<u>1941</u>	1474	1095	2569
<u>1942</u>	1921	1849	3770
<u>1943</u>	6371	1874	8245
<u>1944</u>	13060	2103	15163
<u>TOTAL</u>	23895	6921	30816

SOURCE: United States Strategic Bombing Survey, Statistical Appendix to Overall Report (European War) (Washington, D.C.: U.S. Government Printing Office, 1947), pg. 99.

SELECTED BIBLIOGRAPHY

Primary Sources

Personal Accounts/Memoirs

- Arnold, Henry H. Global Mission . New York: Harper and Brothers, 1949.
- Bialer, Seweryn, ed. Stalin and His Generals: Soviet Military Memoirs of World War II . New York: Pegasus Books, 1969.
- Bor-Komorowski, T. "The Unconquerables." Reader's Digest , February 1946, pp. 127-168.
- Churchill, Winston S. The Second World War . 6 vols. Cambridge, Mass.: Houghton Mifflin Co., 1950. Vol. 3: The Grand Alliance .
 _____. The Second World War . 6 vols. London: Cassell & Co., Ltd., 1951. Vol. 4: The Hinge of Fate .
- Deane, John R. The Strange Alliance . New York: The Viking Press, 1947.
- Denisov, N. "American Fliers at a Soviet Base." Information Bulletin, Embassy of the USSR , 17 Jun 1944, pg. 4.
- Galland, Adolph. The First and the Last . Trans. Mervyn Savill. New York: Henry Holt & Co., 1954.
- Harriman, William Averell and Elie Abel. Special Envoy to Churchill and Stalin . New York: Random House, 1975.
- Hoffer, Heinrich. "A Lesson in Security" in Headquarters, U.S. Army Air Forces, Mediterranean Theater of Operations, Intelligence Section. Defeated . Washington, D.C.: Headquarters, Army Air Forces, 1946, pg. 69.
- Newby, Leroy. Target Ploesti: View from a Bombsight . Novato, Calif.: Presidio Press, 1983.
- Nikitin, A.V. "'Chelnochnye' operatsiy." Voenno-Istoricheskiy Zhurnal , 11, (1975), pp. 41-46.
- Speer, Albert. "The Effects of the Allied Bombing of Germany" in Headquarters, U.S. Army Air Forces, Mediterranean Theater of Operations, Intelligence Section. Defeated . Washington, D.C.: Headquarters, Army Air Forces, 1946, pp. 9-20.
- White, W.L. Report on the Russians . New York: Harcourt, Brace, & Co., 1945.

Unpublished Archival Documents

- Maxwell AFB, Alabama. USAF Historical Research Center. Record 522.01.1. "Activation of Units," 29 July, 1944.

- _____. "Administrative Annex to Field Order No. 371," June, 1944.
- _____. "Brief History of Transportation," 13 September, 1944.
- _____. "Brief of Conference," 25 April, 1944.
- _____. "Brief of Conference," 5 May, 1944.
- _____. "Comments on Eastern Command Initial Operational Period," 12 June, 1944.
- _____. "Communications History," 1944.
- _____. "Conference Notes, 5 February, 1944; Soviet Bases for American Shuttle Bombers," 5 February, 1944.
- _____. Major General John R. Deane, "Letter to Major General Nikolai Stepanov," 10 April, 1944.
- _____. Major General John R. Deane, "Message to AGWAR," 16 March, 1944.
- _____. "Diplomatic and Consular Contacts for Current and Subsequent Echelons," 24 February, 1944.
- _____. "Enemy Air Attacks Against Eastern Command Bases," 25 June, 1944.
- _____. "Excerpts from U.S. Military Mission Notes," 1944.
- _____. "History, Air Traffic Flight Section," 28 July, 1944.
- _____. "History of AAF Station 560, April 1944 to June 1944," 1944.
- _____. "History of the Armament-Automotive Section in Eastern Command," 1944.
- _____. "History of Eastern Command Maintenance Section," 1 August, 1944.
- _____. "History of the Maintenance Section for the Month of August," 1944.
- _____. "History of the Medical Section," 15 August, 1944.
- _____. "History of Supply Division, Eastern Command," 1944.
- _____. Dr. Bruce C. Hopper, "Interview with Brigadier General Alfred A. Kessler," 5 July, 1944.
- _____. "An Inspection of Bases at Poltava, Mirgorod, and Pinyatin," 2 April, 1944.
- _____. "Inspection of Russian Airdromes at Kharkov and Poltava, 10 March, 1944," 10 March, 1944.
- _____. "Intelligence, FRANTIC JOE," June 1944.

- _____. Lieutenant Colonel William M. Jackson, "Observation of Medical Service during Air Attack," 1944.
- _____. Lieutenant Colonel William M. Jackson, "Report of Activity of Two Russian Soldiers during Emergency of 22 June, 1944," 24 June, 1944.
- _____. Colonel Alfred A. Kessler, "Progress of FRANTIC Project," 6 April, 1944.
- _____. Colonel S.K. Kovalev, "Message to Colonel Cullen," 30 July, 1944.
- _____. Colonel S.K. Kovalev, "Message to Colonel Cullen," 31 July, 1944.
- _____. Colonel S.K. Kovalev, "Message to Colonel Cullen," 4 August, 1944.
- _____. Major Albert Lepansky, "Memorandum for Colonel Youngs," 4 March, 1944.
- _____. "Meeting at Aviation General Staff Headquarters," 16 March, 1944.
- _____. "Meeting at Red Army Air Force Headquarters," 30 March, 1944.
- _____. "Meeting at VVS Air Force Headquarters," 5 April, 1944.
- _____. "Minutes of Meeting, 28 February, 1944," 28 February, 1944.
- _____. "Mission to Kharkov," 3 July, 1944.
- _____. "Movement of Russian Cargo through the Persian Gulf," 8 May, 1944.
- _____. Colonel Archie J. Old, "Report on Shuttle Mission to Russia," 6 July, 1944.
- _____. "Operational Factors, Eastern Command Bases," 25 June, 1944.
- _____. "Operations Summary," 16 June, 1944.
- _____. "Outline of Operations, Corps of Engineers Section, March to October, 1944."
- _____. "Personnel," 3 August, 1944.
- _____. "Personnel for FRANTIC," 18 March, 1944.
- _____. "Personnel Reports," 28 May, 1944.
- _____. "Personnel Reports," 5 June, 1944.
- _____. "Personnel Reports," 2 July, 1944.
- _____. "Personnel Section History," 1944.
- _____. "Photo Intelligence Section," 1944.
- _____. "Quartermaster History through August 1944," 1944.

- _____. "Relations and Continuity of Air Operations from Bases in the USSR," 1944.
- _____. "Report of Enemy Land Mining Operation," 2 August, 1944.
- _____. "Report of Organization of a Special Service Program for Eastern Command," 15 August, 1944.
- _____. "Report of Proceedings of Board of Officers," 2 August, 1944.
- _____. "Report on Conference regarding Intelligence and Reconnaissance Matters," 17 March, 1944.
- _____. "Reported Incidents Involving American Soldiers and Russian Personnel," 10 July, 1944.
- _____. "Reports to Russian Agencies on Movement of USAAF Personnel, 10 May, 1944.
- _____. "Russian Bases for Photo Reconnaissance," 7 April, 1944.
- _____. "Security Eastern Command," 15 September, 1944.
- _____. "Story of Men Running New Russian Airbases," 3 June, 1944.
- _____. Lieutenant General Carl Spaatz, "Personal to Arnold," 1944.
- _____. Record 522.01-2. "History of the Eastern Command, Chapter I, Strategy and Mission," 1944.
- _____. "History of the Eastern Command, Chapter III, Combat Operations," 1944.
- _____. "History of the Eastern Command, Chapter IV, Intelligence," 1944.
- _____. "History of the Eastern Command, Chapter V, Personnel," 1944.
- _____. "History of the Eastern Command, Chapter VI, Organization," 1944.
- _____. "History of the Eastern Command, Chapter VII, Logistics," 1944.
- _____. "History of the Eastern Command, Chapter VIII, Politics," 1944.
- _____. Record 522.01-03. "History of the Eastern Command, 1 October, 1944 through 31 March, 1944.
- _____. Record 522.01-04. "History of the Eastern Command, 1 April, 1945 through 23 June, 1945.
- _____. Record 522.04-1. "FRANTIC History: Negotiation and Planning," 1944.
- _____. Record 522.057-1. "Summaries, Chapter 12, Conclusions," 1944.
- _____. Record 522.0591-1. "Report on Status of Morale in the Eastern Command," 5 October, 1944.

- _____. "Record of Special Events, Eastern Command."
- _____. Record 522.0591-3. Colonel Alfred A. Kessler, "Diary, 5 February, 1944 through 7 May, 1944," 1944.
- _____. Record 522.115. "Antiaircraft Defenses, Eastern Command Bases," 19 July, 1944.
- _____. "Brief of Action to Supply Aviation Gasoline," 21 May, 1944.
- _____. "Chronological Record of FRANTIC Project," 1944.
- _____. "FRANTIC Daily Progress Reports, January-August, 1944," 1944.
- _____. "Personnel for FRANTIC by Section and Echelon," 1944.
- _____. Record 522.161. Major General Fred L. Anderson, "Personal Letter to W. Averell Harriman, hand-carried by Col. Griffith," 1944.
- _____. Major General Fred L. Anderson, "Message to AGWAR, Washington, D.C.," 24 January, 1944.
- _____. Major General Fred L. Anderson, "Report on Visit to Russia by a Mission of USSTAF Officers," 21 May, 1944.
- _____. General H.H. Arnold, "Message to Spaatz," 18 July, 1944.
- _____. General H.H. Arnold, "Message to Spaatz," 26 July, 1944.
- _____. "Cable to Colonel Youngs," 5 May, 1944.
- _____. "Conference Notes, USSTAF Headquarters," 8 February, 1944.
- _____. Major General John R. Deane, "Message to Spaatz," 3 May, 1944.
- _____. "FRANSTAT," 30 May, 1944.
- _____. Lieutenant Colonel William M. Jackson, "Report on Trip to Kiev to See 1st Lt. David K Rowe," 29 June, 1944.
- _____. Major General Hugh J. Knerr, "FRANTIC Logistics Situation," 25 August, 1944.
- _____. General George C. Marshall, "Message to Spaatz and Deane," 20 February, 1944.
- _____. "Record of Telephone Call, 3rd Air Division HQ," 14 August, 1944.
- _____. "Russian Bombs," 29 April, 1944.
- _____. "Shuttle Bombing," 15 February, 1944.
- _____. Lieutenant General Carl Spaatz, "Message to Eaker for Twining," 17 February, 1944.
- _____. "Supplies Expressed in Percentage Extracted for Kessler's Cables,"

1944.

- _____. Colonel C.H. Voeller, Chief of Transportation, "Memorandum for Colonel Youngs," 16 February, 1944.
- _____. Record 522.161-5. General H.H. Arnold, "Handwritten 9/7 Note, with Annotations," 7 September, 1943.
- _____. Colonel R.W. Bonneville, "Recent Developments in Connection with the FRANTIC Operation."
- _____. "Chapter 4, Operations, Combat," 1944.
- _____. Major General John R. Deane, "Letter to Arnold," 4 April, 1944.
- _____. "Digest of Conference Held with General Deane on 8th and 10th August, 1944," 1944.
- _____. "Fourth and Fifth FRANTIC Mission," 10 August, 1944.
- _____. "FRANTIC III," 1 August, 1944.
- _____. Major General Barney M. Giles, "Employment of Heavy Bombers from Airports in Russia," 5 September, 1943.
- _____. Major General Barney M. Giles, "Employment of Heavy Bombers from Airports in Russia," 10 November, 1943.
- _____. Colonel Edward D. Gray. "German Bombing of Poltava Airdrome on 21st June 1944," 29 June, 1944.
- _____. "Message, Joint Chiefs of Staff to Spaatz," 19 April, 1944.
- _____. Colonel Alfred R. Maxwell, "Shuttle Bombings to Russia from UK and Italy," 22 November, 1943.
- _____. "Narrative Report of FRANTIC III Operation, with Annotation," 28 July, 1944.
- _____. Lieutenant General Carl Spaatz, "Letter to General Arnold," 21 April, 1944.
- _____. Lieutenant General Carl Spaatz, "Shuttle Bombing Operations to Russia," 3 May, 1944.
- _____. Lieutenant General Carl Spaatz, "USSTAF Mission to Russia," 21 May, 1944.
- _____. "Summary of Sixth FRANTIC Mission," 13 September, 1944.
- _____. "Summary of Seventh FRANTIC Mission," 15 September, 1944.
- _____. "Summary of Eighth (sic) FRANTIC Mission," 19 September, 1944.
- _____. Colonel Garland H. Williams, Acting Chief of Strategic Logistics Branch, "Logistic Implications of Shuttle Bombing of Eastern Germany

from the USSR, " 9 December, 1943.

- _____. Record 622.430-6. "Account of Captain J.W. Sperling, Asst. Group S-3, 31st Fighter Group, on FRANTIC 3 Operations," 1944.
- _____. "Message, AGWAR to AFHQ," 28 July, 1944.
- _____. "Announcement of Staff Officers, General Order No. 7," 6 June, 1944.
- _____. "Assumption of Command, General Order No. 6, " 5 June, 1944.
- _____. "Command of Army Air Forces Troops in Union of Soviet Socialist Republics," 27 May, 1944.
- _____. "Conversation Record, 2 February, 1944, Subject: Russian Bases for American Shuttle Bombers and Photo Reconnaissance Planes," 2 February, 1944.
- _____. "Conversation Record, 5 June, 1944, Subject: Activities of the American Air Force," 5 June, 1944.
- _____. Colonel Paul T. Cullen, "Eastern Command Targets," 11 July, 1944.
- _____. Colonel Paul T. Cullen, "Message to Eaker," 3 July, 1944.
- _____. Colonel Paul T. Cullen, "Message to Eaker," 18 August, 1944.
- _____. Major General John R. Deane, "Message to Arnold," 26 August, 1944.
- _____. Major General John R. Deane, "Message to Spaatz," 26 May, 1944.
- _____. Major General John R. Deane, "Message to Spaatz," 31 May, 1944.
- _____. Major General John R. Deane, "Message to Spaatz," 1 June, 1944.
- _____. "Debreczen Damage Assessment, with revision," June, 1944.
- _____. Lieutenant General Ira Eaker, "Message to Deford," 25 June, 1944.
- _____. Lieutenant General Ira Eaker, "Message to Spaatz," 26 May, 1944.
- _____. Lieutenant General Ira Eaker, "Message to Spaatz," 31 May, 1944.
- _____. Lieutenant General Ira Eaker, "Message to Spaatz," 2 June, 1944.
- _____. Lieutenant General Ira Eaker, "Message to Spaatz," 10 July, 1944.
- _____. Lieutenant General Ira Eaker, "Message to Spaatz," 10 August, 1944.
- _____. Lieutenant General Ira Eaker, "Message to Twining," 14 June, 1944.
- _____. Lieutenant General Ira Eaker, "Message to Twining," 9 July, 1944.
- _____. "Eastern Command Narrative of Operations, 2 June, 1944," 1944.
- _____. "Eastern Command Narrative of Operations, 6 June, 1944," 1944.

- _____. "Excerpt, History of the MAAF, Chapter XVII, Relations with Russia," 1944.
- _____. "Excerpt, MAAF Intops Summary No. 325, Focsani North Airdrome Installation, 5 Wing," 11 June, 1944.
- _____. "Extract, 15th Air Force Daily News Release," August, 1944.
- _____. "Focsani Damage Assessment," June, 1944.
- _____. "FRANTIC IV," 1944.
- _____. "Galati P.R.U., 6 June, 1944," 6 June, 1944.
- _____. "General Order Number One," 10 April, 1944.
- _____. "Item 6, Intops Summary No. 370," 26 July, 1944.
- _____. "Item 9, Intops Summary No. 370," 26 July, 1944.
- _____. "Item 12, Intops Summary No. 368," 24 July, 1944.
- _____. "Item 17, Intops Summary No. 381, 9 August, 1944.
- _____. "Item 20, Intops Summary No. 381, 9 August, 1944.
- _____. Colonel Alfred A. Kessler, "Message to Eaker," 1 June, 1944.
- _____. Colonel Alfred A. Kessler, "Message to Spaatz," 30 May, 1944.
- _____. Colonel Alfred A. Kessler, "Message to Spaatz," 6 August, 1944.
- _____. Major General Hugh J. Knerr, "Message to Frank," 20 June, 1944.
- _____. "MAAF History of FRANTIC, 26 October, 1943 to 15 June, 1944," 12 July, 1944.
- _____. "MAAF Message to 15th Air Force: Operation FRANTIC," 27 May, 1944.
- _____. "MAPRW Message to Eastern Base Command," 27 May, 1944.
- _____. General George C. Marshall, "Message to Eisenhower," 9 May, 1945.
- _____. "Minutes of Talk, Harriman and Walsh, 2 August, 1944," 2 August, 1944.
- _____. "Narrative Account of Shuttle Mission to Russia (FRANTIC 3)," 1944.
- _____. "Narrative Report, Mission No. 593, 31st Fighter Group, Zilistea, Rumania, 22 July, 1944," 27 July, 1944.
- _____. "Narrative Report, Mission No. 594, 31st Fighter Group, Mielec, Rumania, 25 July, 1944," 27 July, 1944.

- _____. "Narrative Report, Mission No. 61, 52nd Fighter Group, Focsani, Rumania, 4 August, 1944," 7 August, 1944.
- _____. "Narrative Report, Mission No. 62, 52nd Fighter Group, Ploesti-Bucharest area, Rumania, 6 August, 1944," 6 August, 1944.
- _____. "Narrative Report, Mission No. 745, 82nd Fighter Group, Focsani, Rumania, 4 August, 1944," 4 August, 1944.
- _____. "Narrative Report, Mission No. 746, 82nd Fighter Group, Ploesti-Bucharest Area, Rumania, 6 August, 1944," 6 August, 1944.
- _____. Lieutenant Colonel L. A. Neveleff, "Utilizing Russian Ground Sources for Implementing Strategic Target Information, Draft," 21 July, 1944.
- _____. Lieutenant Colonel L. A. Neveleff, "Mission to Eastern Command, USSTAF," 5 August, 1944.
- _____. Brigadier General Lauris Norstad, "Memorandum to Air Commander in Chief," 12 June, 1944.
- _____. "Operation FRANTIC III 22-26 July, 1944/ Operation FRANTIC IV 4-6 August, 1944, Historical Monograph," 1944.
- _____. "Operations Order, AAF Station #559," 5 June, 1944.
- _____. "Photographic Interpretation Report No. G53, Romania Aerodrome Gilistea (sic)," 1944.
- _____. "Report of FRANTIC JOE Originally Intended for Gen. Spaatz But Never Sent," 1944.
- _____. "Second Supplement to 52nd Fighter Group Narrative Report, Mission No. 62," 16 August, 1944.
- _____. Lieutenant General Carl Spaatz, "Message to Doolittle," 30 July, 1944.
- _____. Lieutenant General Carl Spaatz, "Message to Doolittle, Kessler, Eaker," 30 May, 1944.
- _____. Lieutenant General Carl Spaatz, "Message to Doolittle, Walsh," 9 August, 1944.
- _____. Lieutenant General Carl Spaatz, "Message to Deane," 26 May, 1944.
- _____. Lieutenant General Carl Spaatz, "Message to Eaker," 23 April, 1944.
- _____. Lieutenant General Carl Spaatz, "Message to Eaker," 4 August, 1944.
- _____. Lieutenant General Carl Spaatz, "Message to Eaker," 10 August, 1944.

- _____. Lieutenant General Carl Spaatz, "Message to Eaker, Kessler, Doolittle," 13 June, 1944.
- _____. Lieutenant General Carl Spaatz, "Message to Eaker, Twining Concerning F-5 Flights," 19 June, 1944.
- _____. Lieutenant General Carl Spaatz, "Message to Eaker, Twining Concerning Next FRANTIC Mission," 19 June, 1944.
- _____. Lieutenant General Carl Spaatz, "Message to Walsh," 22 June, 1944.
- _____. Lieutenant General Carl Spaatz, "Message to Walsh," 12 September, 1944.
- _____. Lieutenant General Carl Spaatz, "Shuttle Bombing Operations Utilizing Bases in Russia," 28 April, 1944.
- _____. "Special Account of Fighter Sweep to Russia, 31st Fighter Group," 1944.
- _____. Captain J.W. Sperling, "Account of FRANTIC 3 Operations, 31st Fighter Group," 1944.
- _____. "Supreme Allied Commander's Conference, Russian Air Force Detachment at Bari," 22 July, 1944.
- _____. "Third Supplement to 52nd Fighter Group Narrative Report, Mission No. 61," 17 August, 1944.
- _____. Major General Nathan Twining, "Message to Eaker," 27 May, 1944.
- _____. Major General Nathan Twining, "Message to Eaker," 11 June, 1944.
- _____. Major General Nathan Twining, "Message to Eaker," 8 July, 1944.
- _____. Major General Nathan Twining, "Message to Eaker," 21 August, 1944.
- _____. Major General Robert L. Walsh, "Message to Cullen," 2 July, 1944.
- _____. Major General Robert L. Walsh, "Message to Eaker," 7 June, 1944.
- _____. Major General Robert L. Walsh, "Message to Kessler," 28 August, 1944.
- _____. Major General Robert L. Walsh, "Message to Spaatz," 7 August, 1944.

Published Diplomatic Papers

U.S. Department of State. "Memorandum by Mr. Harry L. Hopkins, Personal Representative of President Roosevelt," 31 July, 1941 in Foreign Relations of the United States, 1941 . 7 vols. Washington, D.C.: U.S. Govt. Printing Office, 1958. Vol. I: General , pp. 805-814.

_____. "Communication, Ambassador William H. Standley to V.M. Molotov, No. L-2," 19 June, 1942 in Foreign Relations of the United States, 1942 . 6 vols. Washington, D.C.: U.S. Govt. Printing Office, 1961. Vol. III: Europe , pg. 597.

_____. "Communication, Ambassador William H. Standley to Marsahl J.V. Stalin, No. L-3," 24 June, 1942 in Foreign Relations of the United States, 1942 . 6 vols. Washington, D.C.: U.S. Govt. Printing Office, 1961. Vol. III: Europe , pp. 599-600.

_____. "Communication, Ambassador William H. Standley to Secretary of State Cordell Hull," 2 July, 1942 in Foreign Relations of the United States, 1942 . 6 vols. Washington, D.C.: U.S. Govt. Printing Office, 1961. Vol. III: Europe , pg. 604.

_____. "Communication, Ambassador William H. Standley to V.M. Molotov, No. L-5," 9 July, 1942 in Foreign Relations of the United States, 1942 . 6 vols. Washington, D.C.: U.S. Govt. Printing Office, 1961. Vol. III: Europe , pg. 607.

_____. "Memorandum, Llewellyn E. Thompson to Loy W. Henderson," 21 November, 1942 in Foreign Relations of the United States, 1942 . 6 vols. Washington, D.C.: U.S. Govt. Printing Office, 1961. Vol. III: Europe , pg. 660.

_____. "Communication, Loy W. Henderson to V.M. Molotov," 17 December, 1942 in Foreign Relations of the United States, 1942 . 6 vols. Washington, D.C.: U.S. Govt. Printing Office, 1961. Vol. III: Europe , pg. 677.

_____. "Communication, Eugene H. Dooman to V.M. Molotov, No. L-26" 1 January, 1943 in Foreign Relations of the United States, 1942 . 6 vols. Washington, D.C.: U.S. Govt. Printing Office, 1961. Vol. III: Europe , pg. 683.

_____. "Communication, Ambassador William H. Standley to V.M. Molotov, No. L-14," 9 October, 1942 in Foreign Relations of the United States, 1942 . 6 vols. Washington, D.C.: U.S. Govt. Printing Office, 1961. Vol. III: Europe , pg. 731.

_____. "Communication, Ambassador William H. Standley to V.M. Molotov, No. L-15," 12 October, 1942 in Foreign Relations of the United States, 1942 . 6 vols. Washington, D.C.: U.S. Govt. Printing Office, 1961. Vol. III: Europe , pp. 733-734.

_____. "Communication, Ambassador William H. Standley to V.M. Molotov, 10 January, 1943 in Foreign Relations of the United States, 1943 . 6 vols. Washington, D.C.: U.S. Govt. Printing Office, 1963. Vol. III: The British Commonwealth, Eastern Europe, the Far East ,

pg. 616.

_____. "Communication, Marshal J.V. Stalin to President Roosevelt," 13 January, 1943 in Foreign Relations of the United States, 1943 . 6 vols. Washington, D.C.: U.S. Govt. Printing Office, 1963. Vol. III: The British Commonwealth, Eastern Europe, the Far East , pp. 620-621.

_____. "Communication, H. Freeman Matthews to Secretary of State," 10 March, 1943 in Foreign Relations of the United States, 1943 . 6 vols. Washington, D.C.: U.S. Govt. Printing Office, 1963. Vol. III: The British Commonwealth, Eastern Europe, the Far East , pp. 633-635.

_____. "Memorandum, Loy W. Henderson to Ray Atherton," 15 March, 1943 in Foreign Relations of the United States, 1943 . 6 vols. Washington, D.C.: U.S. Govt. Printing Office, 1963. Vol. III: The British Commonwealth, Eastern Europe, the Far East , pg. 638.

_____. "Communication, Ambassador William H. Standley to Secretary of State, No. 297," 13 April, 1943 in Foreign Relations of the United States, 1943 . 6 vols. Washington, D.C.: U.S. Govt. Printing Office, 1963. Vol. III: The British Commonwealth, Eastern Europe, the Far East , pg. 646.

_____. "Memorandum of John D. Hickerson," 17 July, 1943 in Foreign Relations of the United States, 1943 . 6 vols. Washington, D.C.: U.S. Govt. Printing Office, 1963. Vol. III: The British Commonwealth, Eastern Europe, the Far East , pp. 678-680.

_____. "Communication, Acting Secretary of State Adolf A. Berle to Maxwell M. Hamilton," 1 October 1943 in Foreign Relations of the United States, 1943 . 6 vols. Washington, D.C.: U.S. Govt. Printing Office, 1963. Vol. III: The British Commonwealth, Eastern Europe, the Far East , pg. 704.

_____. "Communication, Secretary of State to Ambassador William Averell Harriman," 6 December, 1943 in Foreign Relations of the United States, 1943 . 6 vols. Washington, D.C.: U.S. Govt. Printing Office, 1963. Vol. III: The British Commonwealth, Eastern Europe, the Far East , pp. 723-725.

_____. "Presentation of Major General John R. Deane," 20 October, 1943 in Foreign Relations of the United States, 1943 . 6 vols. Washington, D.C.: U.S. Govt. Printing Office, 1963. Vol. I: General , pp. 778-780.

_____. "Most Secret Protocol, 19-30 October, 1943 Moscow Conference," 1 November, 1943 in Foreign Relations of the United States, 1943 . 6 vols. Washington, D.C.: U.S. Govt. Printing Office, 1963. Vol. I: General , pg. 773.

_____. "Notes on Meeting of 1 December, 1943 by Charles E. Bohlen," 1 December, 1943 in Foreign Relations of the United States, Diplomatic Papers, The Conferences at Cairo and Teheran, 1943 . Washington, D.C.: U.S. Govt. Printing Office, 1961, pg. 596.

_____. "Secret Communication of President Roosevelt to Marshal Stalin

Regarding Air Operations Against Germany," 29 November, 1943 in Foreign Relations of the United States, Diplomatic Papers, The Conferences at Cairo and Teheran, 1943 . Washington, D.C.: U.S. Govt. Printing Office, 1961, pp. 617-618.

_____. "Secret Communication of President Roosevelt to Marshal Stalin Regarding Advance Planning for Air Operations in the Northwestern Pacific," 29 November, 1943 in Foreign Relations of the United States, Diplomatic Papers, The Conferences at Cairo and Teheran, 1943 . Washington, D.C.: U.S. Govt. Printing Office, 1961, pp. 618-619.

_____. "Secret, Unnumbered Personal Communication to the President from William Averell Harriman," 27 December, 1943 in Foreign Relations of the United States, Diplomatic Papers, The Conferences at Cairo and Teheran, 1943 . Washington, D.C.: U.S. Govt. Printing Office, 1961, pp. 859-861.

_____. "Communication, Ambassador W. Averell Harriman to the Secretary of State, # 69," 9 January, 1944 in Foreign Relations of the United States, 1944 . 7 vols. Washington, D.C.: U.S. Govt. Printing Office, 1966. Vol. IV: Europe , pp. 802-803.

_____. "Communication, Ambassador W. Averell Harriman to the Secretary of State, # 86," 11 January 1944 in Foreign Relations of the United States, 1944 . 7 vols. Washington, D.C.: U.S. Govt. Printing Office, 1966. Vol. IV: Europe , pp. 807-808.

_____. "Memorandum of Kremlin Meeting, 2 February, 1944 by William Averell Harriman," 2 February, 1944 in Foreign Relations of the United States, 1944 . 7 vols. Washington, D.C.: U.S. Govt. Printing Office, 1966. Vol. IV: Europe , pp. 942-944.

_____. "Communication, Ambassador William Averell Harriman to President Roosevelt," 12 March, 1944 in Foreign Relations of the United States, 1944 . 7 vols. Washington, D.C.: U.S. Govt. Printing Office, 1966. Vol. IV: Europe , pp. 949-950.

_____. "Communication, Ambassador William Averell Harriman to President Roosevelt, # 1061/1062," 27 March, 1944 in Foreign Relations of the United States, 1944 . 7 vols. Washington, D.C.: U.S. Govt. Printing Office, 1966. Vol. IV: Europe , pg. 956.

_____. "Personal Communication, William Averell Harriman to President Roosevelt," 11 June, 1944 in Foreign Relations of the United States, 1944 . 7 vols. Washington, D.C.: U.S. Govt. Printing Office, 1966. Vol. IV: Europe , pp. 965-966.

_____. "Communication, Vladivostok Consulate to Secretary of State, #34," 1 August, 1944 in Foreign Relations of the United States, 1944 . 7 vols. Washington, D.C.: U.S. Govt. Printing Office, 1966. Vol. IV: Europe , pg. 975.

_____. "Communication, William Averell Harriman to U.M. Molotov," 20 August, 1944 in Foreign Relations of the United States, 1944 . 7 vols. Washington, D.C.: U.S. Govt. Printing Office, 1966. Vol. IV: Europe , pg. 984.

_____. "Communication, Marshal J.V. Stalin to President Roosevelt," 22 August 1944 in Foreign Relations of the United States, 1944 . 7 vols. Washington, D.C.: U.S. Govt. Printing Office, 1966. Vol. IV: Europe , pg. 984.

_____. "Personal Communication, William Averell Harriman to Harry L. Hopkins," 10 September, 1944 in Foreign Relations of the United States, 1944 . 7 vols. Washington, D.C.: U.S. Govt. Printing Office, 1966. Vol. IV: Europe , pp. 988-989.

_____. "Communication, Embassy of the Soviet Union to the Department of State," 29 September, 1944 in Foreign Relations of the United States, 1944 . 7 vols. Washington, D.C.: U.S. Govt. Printing Office, 1966. Vol. IV: Europe , pp. 999-1000.

Other Published Documents

"Air Force Links Russia with Bases There; Forts Are in USSR." New York Times , 3 June 1944, sec. 1, p. 1.

"American Bomber Photo Exhibit in Moscow." Information Bulletin, Embassy of the USSR , 27 June, 1944, pg. 4.

Arnold, General Henry H. Second Report of the Commanding General of the Army Air Forces to the Secretary of War . Washington, D.C.: Headquarters, Army Air Forces, 27 February 1945.

_____. Third Report of the Commanding General of the Army Air Forces to the Secretary of War . Washington, D.C.: Headquarters, Army Air Forces, 12 November, 1945.

Gehlen, Oberst Richard. Abteilung Fremde Heere Ost. "Troop Survey and Organization of the Red Army - Status as of August, 1944" in W. Victor Madej, ed. Red Army Order of Battle 1941-1943 . Allentown, Penn.: Game Publishing, Inc., 1983.

"Letayushchie kreposti." Pravda , 4 June, 1944, sec. 1, p. 3.

"Na baze "Letayushchikh kreposty." Izvestiya , 4 June, 1944, sec. 1, p.4.

United States Strategic Bombing Survey. European War: Overall Report . Book 2. Washington, D.C.: U.S. Govt. Printing Office, 30 September, 1945.

_____. European War: Overall Report, Statistical Appendix . Book 2a. Washington, D.C.: U.S. Govt. Printing Office, 1947.

_____. The Effects of Strategic Bombing on the German War Economy . Book 3. Washington, D.C.: U.S. Govt. Printing Office, 30 October, 1945.

_____. Aircraft Division Industry Report . Book 4. Washington, D.C.: U.S. Govt. Printing Office, 1947.

_____. Inspection Visit to Various Targets . Book 5. Washington, D.C.: U.S. Govt. Printing Office, 1947.

_____. Ordnance Industry Report . Book 80. Washington, D.C.: U.S. Govt.

Printing Office, 1947.

_____. Auto Union AG, Chemnitz and Zwickau . Book 84. Washington, D.C.:
U.S. Govt. Printing Office, 1947.

_____. Oil Division Final Report . Book 109. Washington, D.C.: U.S. Govt.
Printing Office, 1947.

_____. Oil Division Final Report Appendix . Book 110. Washington, D.C.:
U.S. Govt. Printing Office, 1947.

Walsh, Robert L. "Eastern Command Fact Book," in Glenn B. Infield. The
Poltava Affair . New York: Macmillan Publishing Co., Inc., 1973.

Secondary Sources

- Beaumont, Joan. Comrades in Arms: British Aid to Russia, 1941-1945 . London: Davis-Poynter, 1980.
- Berenbrok, Hans Dieter [Cajus Bekker]. The Luftwaffe War Diaries . London: Macdonald, 1966.
- Chamberlain, Peter and Terry Gander. Antiaircraft Guns . New York: Arco Publishing Co., Inc., 1975.
- Coffey, Thomas. Decision Over Schweinfurt . New York: David McKay Co., Inc., 1977.
- Cooper, Matthew. The German Air Force: Anatomy of Failure . New York: Jane's Publishing Co., Inc., 1981.
- Copp, Dewitt S. Forged by Fire . Garden City, N.Y.: Doubleday & Co., 1978.
- Costello, John. The Pacific War 1941-1945 . New York: Rawson, Wade Publishers, Inc., 1981.
- Craven, Wesley F. and Jerome L. Cate. The Army Air Forces in World War II . 7 vols. Chicago: University of Chicago Press, 1949. Vol. 2: Europe: Torch to Pointblank, August, 1942 to December, 1943 , 1949. Vol. 3: Europe: Argument to V-E Day, January, 1943 to May, 1945 , 1951. Vol. 6: Men and Planes , 1952.
- Erickson, John. The Road to Berlin . Boulder, Colo.: Westview Press, 1983.
- _____. The Road to Stalingrad . Boulder, Colo.: Westview Press, 1975.
- Esposito, Vincent J. The West Point Atlas of American Wars . 2 vols. New York: Praeger Publishers, 1959. Vol. II: 1900-1953 .
- Faber, Harold. Luftwaffe: A History . New York: New York Times Books, 1977.
- Frankland, Dr. Noble. The Strategic Air Offensive Against Germany . 4 vols. London: Her Majesty's Stationary Office, 1961. Vol. II: Endeavor . Vol. III: Victory .
- Galland, Adolph, K. Ries, and R. Ahnert. The Luftwaffe at War . Trans. D. Dunbar and I. Dunbar. Chicago: Henry Regnery, 1973.
- Great Soviet Encyclopedia , 1970 ed. Trans. Jean Paradise et. al. S.v. "Mingorod," "Piryatyn," "Poltava."
- Green, William. Famous Bombers of the Second World War . Garden City, N.Y.: Doubleday & Co., Inc., 1975.
- Green, William and Gordon Swanborough. The World's Great Fighter Aircraft . New York: Crescent Books, 1978.

- Hardesty, Von. Red Phoenix . Washington, D.C.: Smithsonian Institute Press, 1982.
- Infield, Glenn B. The Poltava Affair . New York: Macmillan Publishing Co., Inc., 1973.
- Jackson, Robert. The Red Falcons . Brighton: Clifton Books, 1970.
- Kennett, Lee. A History of Strategic Bombing . New York: Charles Scribner's Sons, 1982.
- Kilmary, Robert A. A History of Soviet Airpower . New York: Frederick A. Praeger, 1962.
- Kozhevnikov, M.N. Kommandovaniy i shtab VVS Sovetskoy Armii v Velikoy . Moscow: Izdatestvo Nauka, 1978.
- Lee, Asher. The Soviet Air Force . London: Gerald Duckworth & Co., Ltd., 1950.
- _____, ed. The Soviet Air and Rocket Forces . New York: Frederick A. Praeger, 1967.
- Lukas, Richard C. Eagles East . Tallahassee, Florida: Florida State Univ. Press, 1970.
- Matloff, Maurice. Strategic Planning for Coalition Warfare, 1943-44 . Washington, D.C.: U. S. Govt. Printing Office, 1959.
- Maurer, Maurer. Air Force Combat Units of World War II . Washington, D.C.: U.S. Govt. Printing Office, 1961.
- Middlebrook, Martin. The Schweinfurt-Regensburg Mission . New York: Charles Scribner's Sons, 1983.
- Miller, Russell and the Editors of Time-Life Books. The Soviet Air Force at War . Chicago: Time-Life Books, 1983.
- Morrison, Wilbur H. Fortress Without a Roof . New York: St. Martin's Press, 1982.
- Nofi, Albert A. "The War in the Pacific, 1941-1943." Strategy and Tactics 29 (November, 1971), pp. 15-31.
- Orlov, A. and N. Komarov. "Flying Fortresses Over the Third Reich." Soviet Military Review 7 (July, 1975), pp. 51-52.
- Palmer, R.R., ed. Historical Atlas of the World . Chicago: Rand McNally and Co., 1964.
- Ross, Stephen. "Effectiveness of Anti-aircraft Defenses." Strategy and Tactics 67 (March-April, 1978), pp. 29.
- Seminyaga, M.I. and I.I. Shinkarev, et al. Istoriya Vtoroy Mirovoy Voiny . 12 vols. Moscow: Voennoe Izdatelstvo Ministerstva oborony

SSSR, 1978. Vol. 9: Osvobozhdenie territorii CCCP i Evropeyskikh stran: Voina na Tikhom Okeane i v Azii, 1978.

Shavrov, V.B. Istoriya Konstruktsiy Samoletov v SSSR 1938-1950 g.g.. Moscow: Mashinstroenie Publishing House, 1978.

Shores, Louis. Highways in the Sky, the Story of the AACs. New York: Barnes & Noble, Inc., 1947.

Sims, Edward H. Fighter Tactics and Strategy. New York: Harper and Row, 1972.

Sobel, Lester A., ed. Maps on File. New York: Facts on File, Inc., 1982.

Sovetskaya Voennaya Entsiklopediya, 1977 ed. S.v. "Chelnochnye Operatsiy" by M.N. Kozhevnikov. "Radiolokatsiya." "Zenitnaya Pushka" by A. N. Latukhin. "Zenitny Artilleriyskiy Polk" by E. Ya. Shereshevskiy. "Zenitny Pulemet" by Zenitnaya Pulemetnaya Ustanovka.

Stanford Research Institute. Impact of Aerial Attack in World War II. 2 vols. Washington, D.C.: Federal Civil Defense Administration, June 1953. Vol. 1: Economic Effects: Germany.

Stanley, Colonel Roy M., II. World War II Photo Intelligence. New York: Charles Scribner's Sons, 1981.

Svetlitshin, N.A. Voyska PVO strany v Velikoy Otechestvennoy Voiny. Moscow: Izdatelstvo "Nauka," 1979.

Tuchman, Barbara W. Stillwell and the American Experience in China 1911-1945. New York: The Macmillan Co., 1970.

Weigley, Russell F. Eisenhower's Lieutenants. Bloomington: Indiana Univ. Press, 1981.

_____. The American Way of War. Bloomington: Indiana Univ. Press, 1973.

Windrow, Martin C. German Air Force Fighters of World War Two, Volume Two. Garden City, N.Y.: Doubleday & Co., Inc., 1970.

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